The Journal of the American Medical Association

VOL. XXXIV CHICAGO, ILLINOIS, APRIL 28, 1900. No. 17.

Original Articles.

PERIPHERAL RESECTION OF FIFTH NERVE.*

THREE CASES WITH MICROSCOPIC EXAMINATION OF THE PORTIONS OF THE NERVES REMOVED AND REPORT ON THE LATER CONDITION OF PATIENTS.

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PHILADELPHIA.

DR. KEEN'S REPORT.

CASE 1.—*Resection of supraorbital and infraorbital nerves for tic douloureux.*

Mrs. A. K., aged 53, a patient of Dr. S. Weir Mitchell, first came to the clinic of the Infirmary for Nervous Diseases, Feb. 11, 1898. She had always been healthy and of her eleven children, six were living and well.

In October, 1894, she felt a sudden, slight tingling sensation at the internal angle of the right eye. This increased in severity and finally included the entire right face and anterior part of the scalp. She had to sit up, as lying down increased the pain so much. In 1895 she was very much better. In 1896, she had scarcely any pain at all, but on Feb. 4, 1898, it suddenly recommenced and she had suffered ever since. Along with the pain there were spasmodic twitchings of the muscles about the right eye, and of the face, as long as the pain lasted. On March 3, 1898, I removed the supraorbital and infraorbital nerves, the latter by the orbital route, dividing the nerve toward the apex of the orbit. On Jan. 9, 1899, she again reported at Dr. Mitchell's clinic. She had suffered no pain after the operation, for eleven months, then had a recurrence for two months, accompanying la grippe. In the last two weeks she had had another recurrence, but the pain was neither severe nor constant.

CASE 2.—*Resection of the infraorbital and inferior dental nerves for tic douloureux after ineffectual treatment by massive doses of strychnin.*

Mrs. M., Princeton, N. J., aged 62, first consulted me Dec. 1, 1898, at the instance of Dr. James H. Wikoff. Twenty years ago she had a very serious hemorrhage from a uterine myoma, and a sister died after a hysterectomy for the same trouble. For ten years she had been a great sufferer from hemorrhoids, attended with profuse hemorrhages. She also has a femoral hernia. Ten or fifteen years ago, without assignable cause, a sudden partial palsy of the left side came on, but yielded to treatment. For some time she has had a slight rise of temperature toward evening, and has been more or less of an invalid. The uterine myoma still persists, but has given her no trouble of late. Three years ago, without assignable cause, she began to have excessive pain in the groove between the nose and right cheek. It has now extended over the whole of the cheek and the lower jaw and also to the ear. The pain is the characteristic pain of tic douloureux and is caused by eating, conversation, etc.

Desiring, first, to test the effect of strychnin, which in several cases had enabled me to avoid operation, I commenced with 1/20 gr. t. d., adding one pill to the daily dose, so that the first day she would take three pills; the second, four; the third, five; etc. When she reached six pills a day, she was to add one pill every other day until she had reached ½ gr. a day or until the pain had ceased. Up to the time when she was taking 7/20 gr. a day, no relief from the pain had been experienced, nor had any strychnin symptoms developed. Ordinarily I have found these symptoms develop slightly at first, so as to give warning, but in this case the onset was sudden. Stooping down to pick up something from the floor, her legs were suddenly violently extended and her body was thrown some ten feet across the room. She suffered no injury as her husband fortunately caught her. The medicine was immediately discontinued, and she decided on operation.

This was performed on Dec. 31, 1898. By a slightly curved incision at the lower border of the orbit, the nerve was exposed in the orbit as well as on the face and 3 cm. of the infraorbital resected. I then trephined the lower jaw and removed 5 cm. of the inferior dental, including the mental and incisor branches. The canal in the bone at both ends was plugged with some of Horsley's antiseptic wax. She made a typical, smooth recovery, her temperature only once reaching 100 F., and she went home on Jan. 13, 1899, two weeks after the operation.

Two days after her return she learned, by an operation on her husband, that he had an inoperable internal cancer. She nursed him through the operation and for some time afterward, when he died. She wrote me under date of Feb. 19, 1900, that after the death of her husband she was obliged to build another home and move into it in September, 1899. This involved considerable planning, anxiety and care. Up to that time she had been entirely free from the facial pain, but the moving caused great mental and physical strain, and a return of the pain followed for some weeks. Recently, she has also had another attack of about the same duration, but when she wrote she was entirely free from it. In each instance, however, she had taken cold and suffered from much irritation of the throat and from cough. The pain seems to have been limited entirely to the lower jaw, and was especially provoked by conversation or eating. She lost no sleep, however, and by keeping very quiet the pain lessened and finally disappeared. It came in spasms with a sensation "as if her jaw were in a vice

*Read in a Symposium on the "Fifth Nerve in its Neurological and Surgical Relations," before the College of Physicians of Philadelphia, April 20, 1900.

and being twisted." Her relief from the pain, by the operation, was so great that she writes she would unquestionably seek relief again by another operation should it prove necessary.

Concerning the examination of her face made by Dr. Spiller, Jan. 10, 1899, after the operation, he says: "The anesthetic area begins about a quarter of an inch below the margin of the right lower lid. Complete anesthesia for touch, temperature and pain exists in the shaded area. (Fig. 1.) The anesthetic zone on the side of the face is sharply defined, as it is also in the median line of the face below the nose. It extends over the right ala nasi. Tactile sensation in the right nasal passage is much impaired. Tactile anesthesia is present on the inside of the lips, on the outer and inner surfaces of the lower gum, extending from the median line of the face to about the angle of the mouth. The upper gum appears to be anesthetic

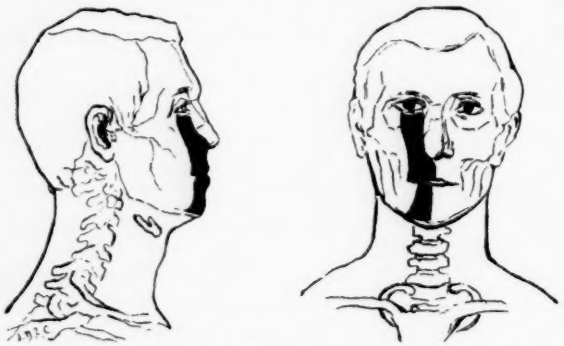

Figure 1.

to touch on its outer and inner aspects from the midline of the face to about the angle of the mouth."

CASE 3.—*Resection of infraorbital and inferior dental nerves for tic douloureux after failure of massive doses of strychnin.*

Miss N., aged 28, first consulted me in the early part of 1898, at the instance of Dr. Kinard, of Lincoln, Pa., for tic douloureux, limited to the infraorbital and inferior dental nerves of the right side. As in Case 2, I wished to test the effect of strychnin before proceeding to operation. She began the treatment under Dr. Kinard's direction on May 9, and continued it up to Jan. 26, 1899. She began with 1/40 gr. t. d., increasing one pill every day until she was taking 8/40 gr. As she then began to feel some of the effects of the strychnin, the dose was not increased, but she took eight granules a day for five months. The strychnin was then increased to nine, and after a week to ten, a day. After taking 10/40 gr. a day for two days, she complained that she felt very nervous and weak, and the arms and legs trembled. The number was then reduced by Dr. Kinard, first, to nine and then to eight granules up to January 26. Finding that the strychnin was inefficient, she then desired operation.

She entered the Jefferson Medical College on Jan. 27, 1899, when the following history was elicited: Her father and mother were both living and well, between 50 and 60 years of age; also nine brothers and sisters. She had the ordinary diseases of childhood, including diphtheria, and made good recoveries, but no other illness till the present trouble began. Menstruation began at 13, and has always been regular but painful; occasionally she had leucorrhea. There was no evidence of any venereal trouble. Nine years ago, she began to have pain on the right side of the face. At first it occurred in brief paroxysms at long intervals, being apparently caused by eating food which was either very hot or very cold, or by exposure to draughts of cold air. The pain began above the right ala of the nose, and was sharp and shooting in character. Gradually the paroxysms became prolonged and the pain spread over the entire right face, except the forehead, which has rarely been involved. For the last three years she has suffered almost constantly, though with slight lessening of severity for short intervals, but the pain has never disappeared entirely. The upper teeth on the right side were extracted three years ago and last spring the lower teeth, but without the least relief. When the pain is most severe she states that the sputum is tinged with blood and mixed with a slight amount of yellowish thick discharge, and that there is a very marked overflow of tears from the right eye. The urine was normal.

On January 29, Prof. H. A. Hare, at my request, examined her lungs and found an impairment of resonance on the right side. Respiration was so defective that nothing could be observed by auscultation. Examination of the right ear, by Dr. Klopp, gave a negative result. Dr. Jones also examined her mouth and throat and found only a slight catarrh. Dr. Jones informed me that he had examined her two years before and had then opened the antrum with a view of determining whether there was any antral disease, but found nothing. I transilluminated the antrum and found nothing abnormal.

Operation was performed on Feb. 1, 1899. The infraorbital and inferior dental were resected as in the preceding case. The portion of the infraorbital measured 2.5 cm. and of the inferior dental 5 cm. in length. After the operation, her temperature only once exceeded 99.8 F., and at the end of a week she was entirely well.

Under date of Feb. 28, 1900, she wrote that two months before she had a renewed attack of pain, but not so severe as before the operation. The attack was limited to the upper jaw, the lower one being entirely free. When the pain is severe in the upper jaw, she has pain in the right ear and she said: "The attacks are very easy to bear. I must say I had the best year this last year that I have had for long. I would accept another operation if I should find the need of it again."

Remarks.—The history of these cases is the usual history surgically that has been impressed on me by very many operations. The relief is scarcely ever permanent, but at the same time is so great that patients do not hesitate to accept a second operation in view of the great relief they have had from the intense suffering. In spite of only the transitory relief, I believe it is wise to do these peripheral operations until the mortality of Gasserian operations has been materially lessened.[1] For my reasons see a paper by Dr. Spiller and myself in the *Amer. Jour. Med. Sci.*, November, 1898. These peripheral operations ought to be done early before the disease has had time to invade the ganglion. Very early operations, say after a month or two of ineffectual medication, might even cure permanently.

The nerve is sometimes reproduced with surprising completeness. In two cases I operated on the inferior dental, for Dr. S. Weir Mitchell, on two successive days. After three years I had to operate again on one case and after six years on the other. In each patient I had removed three small buttons of bone from the lower jaw, 1 cm. in diameter, and chiseled away the intervening bridges of bone. The reproduction of the bone was so perfect that had I not done the operations myself I might even have doubted whether any operation had ever been done. In both I found a complete repro-

duction of the nerve of a size even larger than that found at the first operation. Both were resected again. The specimens were given to a pathologist, from whom, unfortunately, I never could obtain a report in spite of the very unusual and interesting character of the specimens. One of the patients has had slight recurrences, but never severe enough to require another operation. The other had quite a severe return of pain, which was to some extent relieved by the constant current. Finally she died without ever having required a third operation. In another patient on whom I recently operated for the second time, the first operation having been done by another surgeon, I trephined the inferior maxilla, but found no reproduction of the nerve whatever, though the bone was entirely reproduced.

One protest I must make. In nearly every case all the teeth have been extracted. I have never seen the slightest good result from this utterly needless sacrifice.

DR. SPILLER'S REPORT.

CASE 1.—My report of the nerves resected in this case, with illustrations, was published in a paper by Dr. J. K. Mitchell,[2] in 1898, and is reproduced here for the sake of completeness:

Many, possibly most, of the nerve-fibers of the infraorbital nerve, when separated from one another by teasing and stained by a 1 per cent. solution of osmic acid, are found to contain numerous black balls, approximately of the same size. These are nearly equidistant from one another, and are located along the edges of the fibers, leaving, as a rule, the centers free from such accumulations. (Fig. 2). When the focus of the lens is changed, so as to bring other portions of the fibers into view, black balls are apparently found within the centers, but these are probably along the superficial and deep portions of the fibers. The medullary sheaths are thus broken into numerous

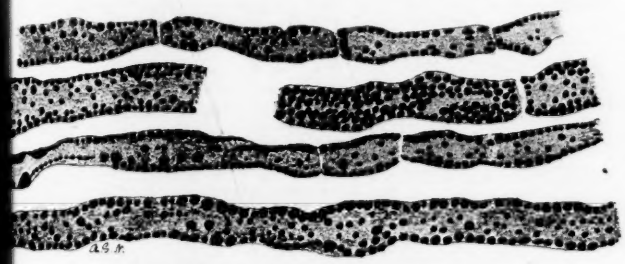

Fig. 2. Degeneration of the medullary sheaths in the form of minute balls stained black by osmic acid.

masses of nearly equal size, occupying the normal position of the myelin sheaths. It is exceptional to find masses of degenerated myelin of a size so large as is frequently seen in degenerating fibers. Similar lesions are found in the supraorbital branch of the fifth nerve. Inasmuch as these nerves were taken from the living subject, and placed immediately afterward in osmic acid, these myelin balls can not be regarded as artefacts, or as due to surgical intervention. Such intervention causes a breaking of the fibers into irregular masses, but probably not the fragmentation of the myelin into numerous balls.

Sections cut with the microtome and stained with carmin and Delafield's hematoxylin show more or less round-cell infiltration about the small vessels. The coats of the smallest vessels are not notably thickened, but one vessel of large size, found in some of the sections, presents a thick media and a somewhat proliferated intima. In some of the nerve-fibers pale purple bodies are found, which resemble the amyloid bodies, and lend some support to the view that the latter are degenerated nerve-fibers. Most of the nerve-fibers contain axis-cylinders, though in some these can not be seen.

The hematoxylin method of Weigert, used on transverse sections, reveals the presence of the myelin balls within the nerve-fibers in the same manner as the osmic acid shows them in longitudinal sections. They appear as a circle of beads about the axis-cylinder. The nerve-fibers in some bundles appear to be fewer than normal, though this may be due to degeneration of the myelin and therefore imperfect adaptability to the hematoxylin stain.

CASE 2.—The blood-vessels, even the smallest, in the infraorbital nerve are thickened and the intima is greatly proliferated, considerably reducing the size of the lumen, but the proliferation of tissue is not confined to any one coat of the vessel. The elastic membrane is much thickened and, in some places, in one of the larger vessels three or more separate elastic membranes are seen. The nerve-fibers, when stained by ammonium-carmin or Weigert's hematoxylin do not appear to be much altered, although occasionally a slightly swollen axone may be seen. In pieces of the nerve teased in the fresh state and stained with osmic acid the disintegration of the myelin in the form of small black balls is found in a number of fibers, and in some nerve-fibers black balls of a little larger size exist. The description of the infraorbital nerve answers very well for the inferior dental.

This was a case in which the peripheral nerve-fibers were very slightly diseased, although the vessels accompanying the nerves were much thickened.

CASE 3.—Infraorbital nerve: Many of the medullary sheaths are greatly swollen, the axones in a number of nerve-fibers are absent, and these swollen fibers in transverse section appear somewhat granular. In some nerve-fibers the axones are very much tumefied. When stained with Weigert's hematoxylin many of the nerve-fibers in transverse sections appear unusually large, and some stain unevenly in shades of black and brown. These large swollen fibers are mingled with small nerve-fibers which stain faintly with the hematoxylin. In some of the nerve bundles the nerve-fibers are more nearly normal. The intima of the small vessels is proliferated. No very distinct round-cell infiltration is seen.

Inferior dental: This nerve is less diseased than the infraorbital. The intima in the small vessels is proliferated. The axones are distinctly swollen in a number of the nerve-fibers, but the great tumefaction of the medullary sheaths with destruction of the axones is not nearly so common as in the infraorbital nerve. Round-cell infiltration is not prominent.

In two cases of trifacial neuralgia, in one of which resection of the peripheral nerves was done by Dr. John B. Roberts, and in the other by Dr. W. J. Taylor, I have found the black balls of myelin described in the other cases. I have failed to find these black balls of myelin only in one of the cases studied by me, in which resection of the peripheral branches of the fifth nerve was done for the relief of tic douloureux. This was a case of Professor Keen's, in which the pain had existed for twenty years.

I have repeated the description of the nerves in Case 1 because of the important findings in this case. When this report was published lesions of this character had not been described. I have since seen this alteration in diseased ulnar nerve-fibers removed after the death of the patient, and this alteration may therefore occur in any diseased peripheral nerve. It is not an artefact because I have found it in several cases in which the nerves were placed in osmic acid immediately after they were removed from the living subject, and it is not due to any manipulation of the surgeon, because I have found it when the nerve was altered by disease and removed after the patient's death. Professor Obersteiner[3] has referred to my findings, both in print and in a discussion at a meeting of one of the medical societies of Vienna.

A somewhat, but not exactly, similar condition has been described by Elzholz.[4]

Case 2 was a very favorable one for a test of the benefit to be derived from early peripheral operations. The nerves were very slightly diseased, and, as Professor Keen has shown, the operation has given relief.

The relief in Case 3, in which the nerves were so greatly altered, is also an evidence that resection of peripheral portions of the fifth nerve is a justifiable operation.

Very distinct disturbance of sensation in the distribution of the infraorbital and inferior dental nerves was found ten days after resection of these nerves in Case 2, and in my patient, who had formerly been under Dr. Mills' care, and in whom these nerves were resected by Dr. Roberts, the disturbance of sensation after the operation was in the same distribution. Sensation, however, is not always lost after resection of a branch of the fifth nerve, and if lost may soon be recovered, and the recovery is not always due to the regeneration of the nerve. An interesting paper illustrating the truth of this statement has been published by J. K. Mitchell.[5] Quite a number of investigators believe that the facial nerve contains sensory fibers—a view which has been held especially by Frankl Hochwart. Some experimental work has been done to demonstrate the presence of these fibers. I quote from a paragraph in my chapter in "Progressive Medicine."[6]

> Many writers (van Gehuchten says most writers) now describe the facial nerve as in part sensory and in part motor. Retzius and, more recently, v. Lenhossék, have shown that the geniculate ganglion is like the cerebrospinal ganglion, and that the central processes of its cells pass into the nerve of Wrisberg. Van Gehuchten finds, by the method of chromatolysis, that the facial nerve at its exit from the stylomastoid foramen undoubtedly contains a certain number of sensory fibers which arise in the geniculate ganglion. The nerve of Wrisberg is, therefore, the sensory root of the seventh nerve. Amabilino (cited by van Gehuchten) has formed a different opinion. He believes that the peripheral processes of the cells of the geniculate ganglion pass into the chorda tympani, and that none of these pass into the peripheral branches of the facial nerve. Van Gehuchten points out that Amabilino found about one-fifth of the cells of the geniculate ganglion normal after section of the chorda tympani, and he very pertinently asks where these cells send their processes if not into the peripheral branches of the facial.

A recent case reported by Biehl[7] is further evidence that the facial nerve contains sensory fibers. A man was stabbed in front of the left ear and had, as a result of the injury, facial palsy with disturbance of sensation in the distribution of the seventh nerve. In this case an involvement of the fifth nerve was improbable.

Pain is not a rare occurrence in facial palsy from exposure to draught, and the explanation usually given is that the fifth nerve has suffered with the seventh. It is probable that in some cases the pain is due to disease of the sensory fibers within the seventh nerve.

Alteration of the peripheral branches of the fifth nerve has been detected in a number of nerves resected for trifacial neuralgia, but the cause of this alteration has not been determined. In two cases I found what appeared to be the explanation of this involvement of the nerve. One of the patients I examined told me that he had fractured his lower jaw, and that after he had entirely recovered from this injury he was attacked with diphtheria, following which pain began in the lower division of the fifth nerve. It seems possible that although the inferior dental nerve had recovered, it offered, as a result of the injury, less resistance to the poison of diphtheria than the nerve-fibers more commonly attacked in this disease; and therefore trifacial neuritis developed. In another of my patients the pain began in the portion of the face which had been the site of erysipelatous inflammation. Here it seemed as though a neuritis had been started by the erysipelas.

It is curious that the right trifacial nerve is more commonly attacked than the left. I noticed this peculiarity in reading the reports of the cases of Professor Keen and others, and at Professor Keen's suggestion Dr. M. B. Tinker has made an examination of the literature to determine the frequency of involvement of the right fifth nerve. In 108 cases in Dr. Tiffany's table, with 24 additional cases collected by Dr. Tinker and the 3 cases reported in this paper by Professor Keen and myself, making 135 cases in all, the affected side is given in 72. In 58 the right fifth nerve was diseased, and in 14 the left.

BIBLIOGRAPHY.

1. Am. Jour. of the Med. Sci., November, 1898.
2. Mitchell, J. K.: Jour. of Nervous and Mental Dis., 1898, p. 400.
3. Obersteiner: Jahresbericht über die Leistungen und Fortschritte auf dem Gebiete der Neurologie und Psychiatrie, Bericht über das Jahr, 1898, p. 247.
4. Elzholz: Jahrb. f. Psych., xvii, 3.
5. Mitchell: l. c., p. 392.
6. Progressive Medicine, Sept., 1899, p. 306,
7. Biehl: Wiener Klin. Woch., Feb. 8, 1900, p. 131.

ENDOTHELIOMA OF THE GASSERIAN GANGLION; TWO SUCCESSIVE RESECTIONS OF THE GANGLION; FIRST, BY THE EXTRADURAL (HARTLEY-KRAUSE) OPERATION, AND, SECONDLY, BY AN INTRADURAL OPERATION.*

CLINICAL REPORT BY F. X. DERCUM, A.M., M.D.
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DR. DERCUM'S CLINICAL REPORT.

The following case, both because of the rarity of the affection from which the patient suffered and because of the interesting nature of the symptoms, is worthy of record.

Mr. X., a business man, 32 years of age, married, a native of Louisville, Ky., came under my care on Nov. 20, 1899.

Family History.—The father died at 68 years of age, of some affection of the heart. The mother is living and well at 60, also a brother and sister. The family history is negative as regards mental, nervous and other diseases.

Personal History.—The patient was rather delicate as a baby, suffered from various diseases of childhood, had an attack of scarlet fever which resulted in disease of the ears, but in youth he seemed to be rather healthy. Twelve years ago he was said to have had an attack of typhoid fever. Some ten years ago he suffered from a venereal sore which was believed to be syphilitic, and although he never presented any secondary symptoms, he was for some time at Hot Springs, Ark., under treatment. The physician at this place, so we were informed, thought he did not have specific disease. He had also

*Read in a Symposium on the "Fifth Nerve in its Neurological and Surgical Relations," before the College of Physicians of Philadelphia, April 20, 1900.

acquired gonorrhea on two occasions. When 20 or 21 years of age he went into business as a manufacturer and worked very hard, often day and night. He was a man of extremely nervous temperament, and was married in September, 1895. Subsequent to this time he complained greatly of severe shooting pains in his legs, and he occasionally walked with a limp. The pains were regarded as rheumatic, and he suffered from them in two successive winters. He had inflammation of the bowels in 1898 and was ill at this time some six or eight weeks. Subsequently he appeared to be well, very strong and energetic but for over a year past has complained of being tired at night and always wished to retire early. He would sleep heavily and without awakening during the entire night. General weakness became evident about this time and was very marked. At times he would have very severe headaches, especially in the mornings, but they would pass off after he had been up and around for an hour or two.

In February, 1898, he discovered a glandular swelling on the left side of the neck, about the size of an olive. It remained stationary for about eighteen months. Early in the summer of 1899 he began to lose in weight and to be extremely irritable and nervous. Various physicians who were consulted considered the glandular swelling tubercular, except one who thought it syphilitic and advised treatment at Hot Springs. He went there on July 1. About the time of his arrival he began to suffer from very severe pain over the left temple and over the left side of the top of the head. The swelling on the side of the neck also became painful; it had not pained him previously. It now began to grow and grew rapidly until it attained the size of a large egg. The pain in the temple was much worse in the evening and night, the patient not being able to sleep until about 4 or 5 o'clock in the morning. He took the baths and also had mixed treatment for seven weeks, while the swelling was painted with iodin. No relief whatever was obtained from this treatment. He then consulted Dr. Abbe, of New York, who removed a series of glands, varying in size from an olive down. These glands, as was subsequently learned from Dr. Abbe, were of a gray, even consistence, not unlike tubercle, but entirely without caseation. A microscopic examination was made at the College of Physicians and Surgeons of New York and endothelioma diagnosticated. Dr. Abbe very kindly sent me a section of one of these glands and I had no difficulty in confirming the diagnosis. The pain in the side of the head subsequently assumed the character of trifacial neuralgia and grew steadily worse. He was treated ineffectually with large doses of the iodids and morphia finally had to be resorted to.

On November 1 Dr. Abbe operated on him a second time, now removing the infraorbital division of the fifth nerve. The pain continued, though it appears to have been for a time less marked in the distribution of this branch. His suffering was so great that he was transferred to a sanatorium. Here his treatment was also without relief.

During the period of development of the neuralgia he had some recurrence of the shooting pains in the legs. For two months he had been in the habit, according to his wife, of dropping off to sleep suddenly. For instance, while talking, he would suddenly fall asleep. This condition was for a time quite marked. The wife herself attributed it to the great loss of sleep at night, thinking that he simply fell asleep in this way during the day from sheer exhaustion.

When first seen by me, Nov. 20, 1899, he was evidently suffering greatly from pain in the entire trigeminal distribution of the left side. The suffering was so terrible that he could not at this time be carefully examined. It was only after a certain amount of morphia had been administered on the following day that an examination could be made. Even after ¼ grain of morphia the pain was agonizing in character and constant, there being, according to the statement of the patient, not a single instant of relief. His expression, gestures and conduct evinced a degree of pain and suffering greater than I have ever before witnessed. The pain appeared to be most marked in the temple, the eyeball and the tissues about the orbit and the brow, less marked in the infraorbital distribution and least in the inferior maxillary distribution. The patient constantly kept the left eye covered by his left hand, and maintained a loud and almost ceaseless moaning and groaning. The suffering, as just stated, appeared to be most marked in the orbit and brow, though at times the patient said the greatest pain was present in the teeth of the upper jaw, more especially in the incisors. He often begged piteously for something to be done to the teeth to relieve them. The pain was accompanied by irregular recurring twitching of the zygomatic muscles. Occasionally this twitching also involved the elevators of the upper lip and of the angle of the mouth. Tested for sensation it was found that the entire area of the trigeminal distribution to the face was decidedly hypesthetic. This hypesthesia could readily be demonstrated over the left side of the nose, the left brow and forehead and over the left temple and cheek. It was especially pronounced over an oval patch in the infraorbital distribution. This patch, which appeared to have the infraorbital foramen as its center, was about 1½ inches in its vertical diameter and 1 inch in its transverse. (See Fig. 1.) Sensation was everywhere sufficiently preserved for the patient to distinguish between a pin point and the head of a pin. Pressure sensation appeared to be everywhere well preserved. This was also the case with the temperature sense. The superficial pain sense could not be studied accurately as the patient declared all handling of the parts gave him pain. Distinct prickling of the skin, however, gave more decided demonstrations of pain than

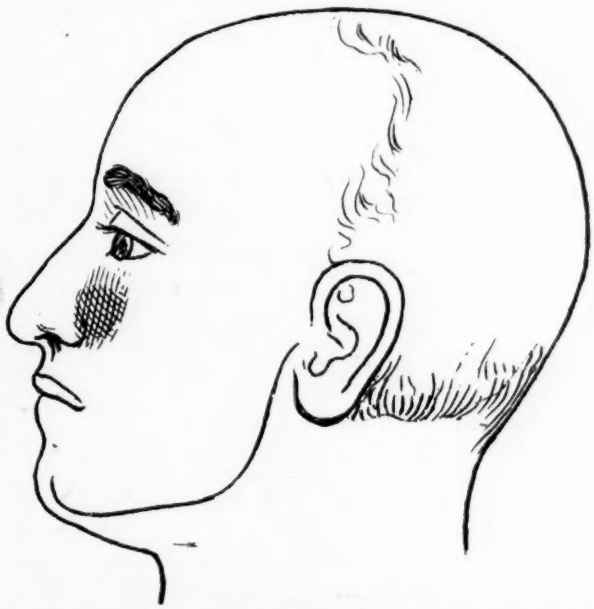

FIG. 1.—Area of hypesthesia previous to first operation by Professor Keen. The dark patch represents the area in which hypesthesia was pronounced.

a mere touch, and there can be no doubt that marked hyperalgesia was present. The conjunctiva was distinctly hypesthetic as compared with the conjunctiva of the opposite eye. The condition of the sense of taste on the left side of the tongue could not be satisfactorily determined. Movements of the tongue and the opening of the mouth so greatly increased the suffering of the patient that no test could be applied with satisfaction. The pain, it should be added, was referred by the patient not only to the surface but also deeply into the tissues.

The patient was excessively weak and, according to his own statements, had lost greatly in weight. He stood with some difficulty and when prevailed on to walk did so with a slightly staggering gait. When tested for station with feet apposed and with his eyes closed, he evinced a tendency to fall backward. These phenomena impressed me at the time as being rather the symptoms of extreme weakness than those of ataxia. When he was seated, the movements of the arms were tested and no ataxia of these members was revealed. The knee-jerks, however, were both absolutely lost. They could neither be elicited by the ordinary methods nor by efforts at reenforcement. The general examination failed to reveal any sensory losses whatever, nor was there any sensory retardation. It should be added that the patient also suffered from an old cystitis which occasionally gave rise to considerable pain.

Prof. G. E. de Schweinitz made an examination of both eyes, with the patient in bed, his head and shoulders raised on pillows. The pupilary reflexes were normal. There was no failure in rotation of the eyes and no nystagmus. Each disc was somewhat anemic. There was neither congestion, neuritis nor atrophy. Both retinæ were normal, the retinal circulation also, and fields for white and red. In addition there was present chronic otitis media of the right ear. This was later confirmed by a detailed examination of the ears, made by Dr. Walter J. Freeman, who reported in addition that the membrane of the left ear was decidedly depressed and scarred but could readily be inflated.

The non-paroxysmal character of the neuralgia, its frightful severity and unvarying intensity, the deep-seated temporal pain, the nearly simultaneous involvement of all branches of the trifacial, the hypesthesia in the distribution of the fifth nerve, and the somnolency suggested to me both an organic cause and the Gasserian ganglion as the seat of the disease. Further, the remarkable result of the microscopic examination of the glandular masses, removed from the neck by Dr. Abbe, suggested the existence of a neoplasm within the cranial cavity. It would be extremely difficult to explain the presence of an endothelioma in the lymphatic glands of the neck on other grounds; and it therefore seemed to me a most important point to confirm the diagnosis as to the nature of the tumors removed by Dr. Abbe by a personal examination, and this, thanks to the kindness of the Doctor, I was able to do. On November 23, I called in Prof. W. W. Keen, with a view to a possible surgical operation directed to the Gasserian ganglion. Dr. Keen carefully examined the patient and was greatly impressed by the character of the pain, which differed, as he expressed it, from that in any case of trigeminal neuralgia he had before seen. On November 25, he was removed to Dr. Keen's private hospital, and on November 27 an operation was performed in which, as the Doctor details, he discovered and removed in large part a tumor occupying the position of the Gasserian ganglion. As far as could be determined, at the time, the foramen rotundum had become both divided and obliterated. Much of the mass back of this and also over the foramen ovale and to some extent posterior to the latter was removed. The fragments of the tumor resembled fibrosarcoma in their microscopic appearance. They were handed to Prof. W. G. Spiller for microscopic examination. It was thought wise to discontinue the operation at this point. The patient promptly rallied, but on resuming consciousness at once complained as bitterly as before of pain. It was also evident that he was delirious, and delirium accompanied by great excitement continued for about ten days, during which it was impossible to make an accurate examination as to the sensory phenomena. He was excessively noisy and loud and almost incessant in his lamentations. Some quiet followed hypodermic injections of morphia, but the periods of relief thus secured were generally short and imperfect.

He made a good surgical recovery from the operation, and the delirium somewhat abated, but the pain continued with undiminished severity. He was examined on December 13 with the very surprising result that no change whatever in the sensory phenomena was observed,

FIG. 2.—Area of hypesthesia after first operation by Professor Keen.

except some increase in the hypesthesia. The temple and the cheek were now decidedly more hypesthetic than before. (See Fig. 2.) This increased diminution in sensation could not, however, be claimed for the conjunctiva or for the brow. The patient was still everywhere able to appreciate touch, and he could for the most part distinguish a pin point from a pin head, though occasionally he failed to make this distinction—especially was this true over the oval patch of pronounced hypesthesia in the infra-orbital distribution discovered at the first examination. He could still everywhere readily distinguish between a hot and a cold spoon, and also between light and deep pressure. An examination of the sense of taste was again without definite result; the patient still complaining bitterly of the pain in his upper teeth and of great distress when any manipulation involving the mouth was attempted. He did say, however, that his food did not taste properly and that the left side of his throat was sore. The left masseter and temporal muscles were completely paralyzed. Some time after the operation a paresis of the left rectus externus was also observed. Prof. G. E. de Schweinitz again examined the eyes and

reported a complete paralysis of the left external rectus muscle, but no other changes.

The pain had evidently not been appreciably influenced by the operation. Professor Spiller further reported that he had found only a few ganglion cells in the fragments of the tumor which had been handed him, and after repeated consultations with Dr. Keen and also with Dr. Charles K. Mills, it was decided to again submit the patient to operation. The second operation was performed by Dr. Keen on December 26. The details and extent of this are described by Dr. Keen. Suffice it for me to say that the operation, as far as it was possible to judge, was most thorough and extensive. All accessible portions of the tumor, except that in relation with the cavernous sinus, were removed. In addition part of the inner end of the petrous bone, including the depression normally occupied by the Gasserian ganglion, was chiseled away and the anterior surface of the pons freely exposed.

As before the patient rallied well from the operation, but he again passed into a condition of confusion and delirium. He was as before noisy, and loudly and ceaselessly dwelt on his pain, which seemed to be unabated. As before, it was referred to the orbit and brow and to the upper teeth. It was not until four days elapsed that it was possible to make another sensory examination. It was then found that the increased hypesthesia noted at the first examination now involved the entire trigeminal distribution. It was, however, as before, merely a hypesthesia and not an anesthesia. The patient was still able to appreciate contact, still able to appreciate decided differences in pressure and, what I regarded as extremely remarkable, still able to appreciate differences in temperature. He readily distinguished, and always correctly, between a spoon dipped in hot and another dipped in cold water. The hypesthesia was as before most pronounced in the oval patch in the infraorbital distribution noted at the previous examinations. In this area the patient would at times fail to differentiate between simple contact and pin pricks, but total sensory loss did not exist. The hypesthesia of the left side of the face further was not sharply limited by the middle line, but merely seemed to grow less pronounced as the sound side was approached. For instance, he felt a pin point clearly on the right side of the nose and for some distance after the bridge of the nose had been well crossed over to the left side. This fact was also observed in the lips, the chin and the forehead. At the final examination the conjunctiva appeared to be profoundly hypesthetic but not anesthetic. It was difficult, however, because of the patient's lamentations and excitability, to conduct this portion of the examination satisfactorily. For the same reason and because of the intense pain which the patient was suffering, no attempt was made to study the sense of taste at this time. The above observations, as before, were verified repeatedly.

Subsequently little or no change took place in the patient's condition and his wound having healed by January 9, he left the city for his home, still complaining loudly and constantly of his pain, and still holding his hand over his brow. I have been informed that since his return home the pain has continued, and that he still requires morphia for its relief. The cornea is now absolutely anesthetic. The eye is immovable and blind and there is much difficulty in raising the upper lid. His general health is much improved though he is quite anemic and very thin. Recently another enlarged gland has appeared under the jaw on the left side.

Remarks.—This remarkable case is interesting first because of the persistence of sensation after undoubted extirpation of the Gasserian ganglion, and secondly because of the rarity of tumors involving this structure. The persistence of sensation would perhaps at first sight suggest that the ganglion and its branches had been imperfectly removed, but no one present at the time of the operation could doubt the accuracy of the anatomic verification nor the thoroughness with which the work was done.

Persistence of sensation, however, both after removal of the branches and even after extirpation of the ganglion is not unknown. Dr. John K. Mitchell[1] has reported two most interesting cases, in the first of which portions of the supraorbital and supratrochlear nerves were removed by Dr. Keen. Subsequently some degree of anesthesia was present for touch and pain, but it was noticed that the loss of sensation was less complete than might have been expected and seemed to be absolute only in an oval area at the outer canthus of the eyelids and of the upper lid. In the second patient Dr. Keen resected the supraorbital and the infraorbital nerves. A subsequent examination revealed an even less degree of loss of touch, pain and heat sense than was present in the first case. "Indeed," says Dr. Mitchell, "it could hardly be said that there was more than slight delay or impairment of perception anywhere in the supraorbital, nasal, palpebral or labial branches." When the patient was discharged after the ninth day there was neither slowness nor impairment of sensation for any form of stimulation. "The touch of the finest filament of thread was instantly felt and correctly located everywhere on the cheek, temple, nose, eyelids and upper lip." Dr. Mitchell also reports his findings in a case in which Dr. Keen had removed the Gasserian ganglion: "After the removal of the ganglion the patient's mental condition was such for nine or ten weeks that no study of the sensation could be made but when it became possible there was no absolute anesthesia to be found except between the margins of the wound. The touch sense was everywhere preserved in some degree, the pain sense was but slightly less in degree than before the operation." "The mucous membrane of the lips and cheek of the right side and of the right side of the tongue was also partially anesthetic." On the right side the sense of taste was entirely lost. In explanation of these remarkable findings, Dr. Mitchell suggests the presence of sensory fibers in the facial nerve, and cites the statements of Turner and Ramon y Cajal as to the relations of the facial nucleus to the sensory trigeminal root and to the substantia gelatinosa. He also cites Frankel-Hochwart's results as to the evidence of slight sensory losses present in some cases of paralysis of the facial nerve. The thought also suggests itself to me that in a case like the present, in which the Gasserian ganglion is slowly and gradually involved, that perhaps a *gradual* substitution of function may take place through the facial nerve.

The persistence of the pain subsequent to the operation is perhaps to be referred to degenerative changes in the sensory root of the fifth nerve, and perhaps also to changes in the cerebrum. The projection of the pain to the surface is analogous to the psychic projection of pain and other sensations beyond the stump of an amputated limb.

To my knowledge but 2 tumors involving the Gasserian ganglion have thus far been reported; 1 by Hagelstam[2] and one by Trénel.[3] In Hagelstam's case, which came to autopsy, there was present a tumor, an endothelioma, of about the size of a walnut, situated in the left, middle cerebral fossa. The dura mater and Gasserian ganglion were completely involved in the growth, which had

in part perforated the underlying bone and penetrated into the posterior portion of the nasopharyngeal cavity. During life the patient had complained of constant pain over the entire left half of the face and over this area and for some centimeters upward on the hairy scalp, sensibility both for pain and touch was lost except in the area of distribution of the great auricular nerve. Over the cornea and the conjunctiva the sensibility was diminished. The sense of taste on the anterior third of the tongue to the left of the median line was lost for bitter and acid substances and for salt and sugar. The temporal muscle appears to have been atrophied. No muscular contractions could be elicited by the strongest currents. The masseter muscle felt firm and hard, but could not be made to contract to the faradic current and the jaw could only be separated for one centimeter.

In Trénel's case there was present an angiolithic sarcoma. It had involved and penetrated the peripheral portions of the right Gasserian ganglion. On microscopic examination, the latter, however, still presented nerve-cells of normal aspect. During life there had been present profound hypesthesia if not complete anesthesia of the right side of the face. The patient also presented marked mental depression, was difficult to examine and the limits of the sensory loss could not be accurately determined. No atrophic nor circulatory disturbances were noted in the eye.

Two other cases have been reported in which the Gasserian ganglion, though not directly involved, suffered from the pressure of a tumor. In one of these, reported by Krause,[4] there was a large cholesteatoma which filled the third ventricle and also involved the adjacent parts, such as the chiasm and sella turcica. The tumor was found to be entirely within the dural sac and there was no involvement of the Gasserian ganglion whatever. The patient had suffered for sixteen years from a persistent and most terrible trigeminal neuralgia. There had never been present headache, giddiness, vomiting, irregularity of the pulse nor any other cerebral symptoms. An examination of the eyes by one of the most distinguished ophthalmologists had also failed to reveal any abnormalities. As he regarded the symptoms sufficient to establish the intracranial seat of the affection, Krause decided to remove the Gasserian ganglion, although peripheral nerve operations had not yet been attempted. The removal was followed by complete relief of pain. However, about two weeks after the operation, headache made its appearance and cerebrospinal fluid began to trickle from the point of drainage. Notwithstanding the insertion of a drainage-tube and other surgical measures, fever set in and the patient died about four weeks after the operation. It is remarkable that in Krause's case nothing could be discovered of the tumor at the time of the operation, but this is no doubt to be explained by the fact of the complete intradural situation of the growth. Krause explains the neuralgia from which the patient suffered by compression of the Gasserian ganglion and its roots. He also considered it probable that the tumor began at the upper edge of the petrous bone; this bone itself was entirely normal.

Another case was reported by Homen,[5] in which a tumor, an endothelioma of the dura mater, had pressed upon and flattened the Gasserian ganglion and its branches. In this case there had been present toothache in the left upper jaw, intense pain and sensations of cold in the entire left half of the face and complete anesthesia, the latter also involving the forehead, the anterior part of the parietal and the temporal regions. The conjunctiva was entirely without sensation, much injection, somewhat swollen and the reflexes were absent. The cornea was cloudy, with ulceration on its inner edge. The mucous membrane of the nose and of the left half of the tongue was anesthetic. The patient appeared to be deaf in the left ear. In addition the entire left half of the face was sunken and atrophic and the left angle of the mouth somewhat depressed. In other words, there was in Homen's case, in addition to the neuralgia and anesthesia, a hemifacial atrophy. Although the ganglion itself was not involved in the growth, a microscopic examination of the peripheral portions of the trigeminal nerve revealed a far-advanced degenerative atrophy of all its branches. This was also the case with the roots of the trigeminal nerve.

DR. KEEN'S SURGICAL REPORT.

I first saw Mr. X. with Dr. Dercum on Nov. 23, 1899, and learned his earlier history. The case at once impressed me as different from an ordinary tic douloureux. As my notes taken at the time state, the pain was not that paroxysmal darting one we see in tic, but a severe and constant aching pain. In view of the removal of the submaxillary endothelioma by Dr. Abbe, and of a later resection of the infraorbital nerve, without any relief, I suspected that there was probably an endothelioma within the skull, involving the ganglion, and that any extracranial operation would be useless. After talking the matter over with Dr. Dercum, we decided on operation on the ganglion.

First Operation.—Nov. 27, 1899, the usual Hartley-Krause operation was done. As soon as the dura was exposed it seemed to be more tense than usual. When I separated it from the middle fossa of the skull, as I approached the median line, I found that it became extremely adherent, much more so than I had ever before observed. As a result of this it was extremely difficult to find the foramina rotundum et ovale. As soon as I reached the vicinity of the ganglion I appreciated that there was a hard, not very irregular, mass of considerable size occupying approximately the site of the ganglion. The dura, when lifted from the base of the skull, could be rolled over a mass about as thick as the forefinger, and I was now thoroughly convinced that we had to deal with a new growth. After much trouble I finally found the seat of the foramen rotundum, but instead of the usually large opening, there were two small depressions in the bone, separated by a bony bridge. Whether they were complete foramina could not be determined, as no probe would pass through these small openings. No trace of the second division passing through these minute foramina could be found. The foramen ovale, however, was found and the third division passing through it, though both the foramen and the nerve were smaller than usual. Partly with the scissors, partly with the gouge, and partly with the Allis dissector, I was able to remove a mass estimated to measure 3.5 by 1.5 cm. I was not able to remove it as an entire mass but piecemeal. It extended from the cavernous sinus, which as far I could judge, formed its inner extremity, to the outer extremity of the foramen ovale. It stopped short of the foramen spinosum, for the middle meningeal was found pulsating and was tied, lest in the removal of the growth I might possibly divide it and be embarrassed by serious hemorrhage. The removal of the mass involved a large opening in the dura, through which a considerable amount of cerebrospinal fluid escaped. I was then confronted with this problem:—in order to remove the inner portion of the tumor, it would be necessary deliberately to open the cavernous sinus. After consultation with Drs. Taylor, Dercum

and Spiller, I decided not to do so, on these grounds: If the tumor were malignant, there were unquestionably other remnants left elsewhere by which it would be reproduced and the removal of the wall of the sinus would be useless, and if it were not malignant, the removal of the major portion of the tumor would probably be followed by the disappearance of the remainder. Moreover, the removal of the outer wall of the sinus would have involved, in all probability, destruction of the third and fourth nerves themselves, thus producing an extensive ophthalmoplegia and in addition to this there would have been also a possibility of injury of the sixth nerve and of the carotid artery. The fragments removed were handed to Dr. Spiller. The osteoplastic flap was replaced and the wound closed, a small gauze wick being passed under the posterior superior angle between the bone and the dura, as a drain. The operation lasted nearly 2½ hours. He was placed in bed in a very satisfactory condition.

From the surgical point of view, his physical recovery was all that could be desired. The day following the operation, his temperature rose to 100 F. With that exception it was never above 99.4 F. The stitches were all removed on the sixth day, the wound being entirely healed. On the third day I removed the stitches by which the eyelids had been closed at the time of operation, and after careful disinfection I placed a Buller shield over the eye. This was removed night and morning and the eye washed with warm boric acid solution. No ocular disturbances followed the operation. The Buller shield was removed after twelve days. The patient left the hospital on the ninth day after operation.

From the mental standpoint, however, things were quite different. The operation was followed by a traumatic insanity, amounting almost to acute delirium, so that the patient had to be watched very carefully lest he do himself or others harm. A part of this I attributed to the withdrawal of his morphin, which was rapidly reduced and by the sixth day was cut off entirely. Various hypnotics were tried and did some good. No reliable examination to determine the sensibility of his face could be made at this time. He, however, complained constantly and bitterly of pain in the head and the left side of his face, especially in the upper teeth. His mental condition, however, gradually improved and by about December 12, the fifteenth day, he was fairly clear. Another complication also was a great deal of vesical pain, the result of stricture, which I dilated with great benefit. As the pain steadily continued and, according to his assertion, was even worse than before, after consultation with Dr. Abbe, it was determined to operate again.

Second Operation.—Dec. 26, 1899, Dr. Abbe was kindly present and, with Dr. Taylor, assisted me in the operation. The former osteoplastic flap was turned down. The bony portion of the flap was in a few minutes caught by a gauze sponge and with but little force was torn loose from the flap. I did not replace it. The dura was then lifted up as at the first operation, and without serious hemorrhage. Dr. Abbe confirmed my observations as to the existence of the foramen ovale and the blocking up of the foramen rotundum. Between the two we found a third opening in the base of the skull, which we judged to be the result of the gouging of the first operation. A moderate blood clot occupied the site of the former operation and a considerably thickened mass of tissue corresponding to the old tumor could be felt. We then decided to open the dura and attack the tumor from within. This was opened by an incision a little smaller than that in the bone. As soon as the flap of dura was turned down, I noticed on the inner surface of the dura quite a number of small granulations like miliary tubercles. They were about 1 to 2 mm. in diameter, and were apparently clear and translucent. There were one or two doubtful little granulations on the pia, but on the flap of dura turned down, there were, I judge, forty or fifty sprinkled over it. Later some others were seen on the dura lining the base of the skull, but much less numerous than those on the flap. Three of these little granulations were excised and given to Dr. Spiller. The pia was a little clouded along the vessels, but elsewhere was perfectly clear. The brain was now lifted up by a broad brain retractor and a very satisfactory view of the base of the skull obtained. As soon as the site of the Gasserian ganglion was disclosed, I at once saw the opening in the dura, as large as the end of the thumb, caused by the first operation. It was partly filled up by a translucent gelatinous mass which resembled, to the eye, a sarcoma having considerable consistency. Along side of it was a considerable mass of blood clot and débris. All of this was finally gouged out and there was left a cavity so large that an ordinary, round, gauze sponge was easily packed into it. The site of this cavity was the inner end of the petrous bone. The carotid was not seen. The ridge along which runs the superior petrosal sinus had been destroyed by the tumor. I then sought for the pons and, on lifting the brain a little further, there came very readily into view the opening of the tentorium and the pons at a lower level. A considerable amount of cerebrospinal fluid welled up from the spinal canal and mingled with the small amount of blood which escaped. This required constant sponging to keep the operation field clear, but there was no difficulty in determining the facts. The temporosphenoidal lobe was slightly lacerated by my retractor, but not to any notable extent. Having apparently done all that was possible, the dura was closed with continuous catgut suture and the external wound with interrupted silkworm gut suture. A small extradural gauze wick was introduced as a drain and to arrest the hemorrhage from a small blood-vessel on the surface of the dura. The operation lasted an hour and a quarter, and he suffered very little from the shock. The temperature after the second operation fluctuated a little above and a little below 100 F. The wound healed by first intention, except at the point of drainage, where a little blood and then bloody serum escaped for about ten days. The patient went to his home in Louisville on January 9, the wound being entirely healed.

Following this operation, after two or three days, during which he was rather dull and stupid, there was also very considerable traumatic insanity. This delirium, however, was not as prolonged nor as severe as that which followed the first operation. He had recovered almost entirely from it within a week.

Dr. Walter J. Freeman examined his ears, as he had suffered from aural discharge for a long time, and reported that the left membrane was retracted and scarred, the diminution in the degree of hearing being exaggerated by the collapsed membrane. On the right the membrane was absent and there was free discharge. He has been treated for the discharge from his ears on and off since he was a child. The Doctor reported as follows: "I do not know what efforts have been made to stop the discharge, but where it is long continued I would rather suspect involvement of the bone. The only thing which promises relief is to open the mastoid freely down to the middle ear and remove the diseased bone. I do not,

however, think there is any need for operation in his case at present. His hearing was benefited by inflation, but there was no marked increase. Indeed, the condition of his ears is too bad for us to look for any great benefit in this direction."

Remarks.—The present case is the first case of tumor of the Gasserian ganglion reported in the United States, and is, so far as I can learn, the third tumor ever reported. It is the first case that has ever been operated on. The operative technique was very satisfactory and his recovery from both operations of so serious a character most gratifying. The view of the base of the brain at the second operation was the most extensive I have ever seen.

DR. SPILLER'S PATHOLOGIC REPORT.

From the William Pepper Laboratory of Clinical Medicine (Phoebe A. Hearst Foundation).

The tumor consists of cells forming long columns, or more irregularly-shaped masses, and at some parts a plexiform arrangement of these cells is seen. In some places the tumor cells are very numerous and the nuclei are small and round, so that the growth resembles a round-cell sarcoma in these portions. The cells which form the long columns have chiefly elongated or oval

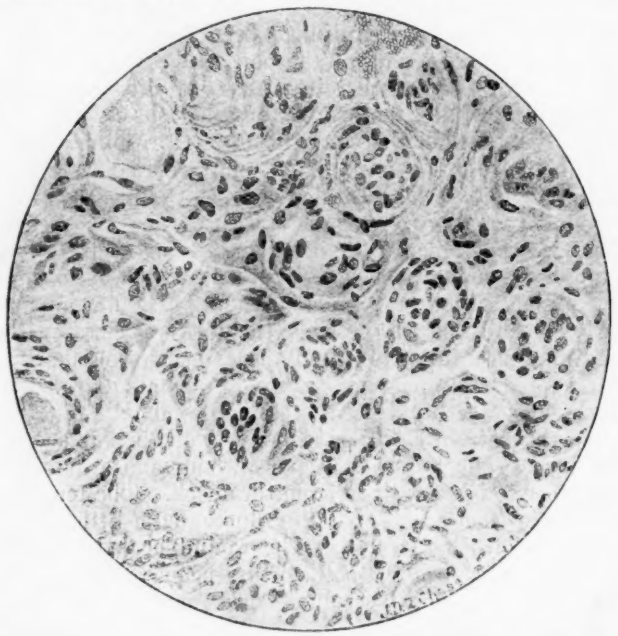

FIG. 3.—Oc. 3. Ob. 7. A portion of the Gasserian ganglion in which the nerve-cells have almost entirely disappeared. A concentric arrangement of the nuclei may be seen in different parts of the field, seeming to indicate that the cells of the capsules have proliferated and filled the spaces left by the destruction of the nerve-cells.

nuclei, and these stain deeply, but at some parts of the tumor the columns are formed of cells with large oval nuclei which take the stain less intensely. The tumor is, in places, rich in fibrous tissue, and this latter appears to consist in part of empty nerve sheaths, the nuclei of which have undergone great proliferation. Many of these nuclei are long and narrow, although some are oval. The tumor is not very vascular.

The Gasserian ganglion is invaded by the new growth, although some parts of the ganglion are relatively free from tumor cells. The nerve-cells within the ganglion are not so numerous as in normal ganglia, and this decrease in number is more noticeable at some parts than at others. Some of the nerve-cells are more shriveled than can be explained by the method of hardening (Müller's fluid), and the nuclei of the capsules about some of the nerve-cells are unusually numerous, indeed in some parts the nerve-cells seem to have disappeared while the cells of the capsules have proliferated and filled the spaces left by the destruction of the nerve-cells. (See Fig. 3.) This explanation is suggested by the concentric arrangement of nuclei seen in certain parts of the ganglion.

In certain parts of the tumor a few medullated nerve-fibers are found, but these are greatly degenerated and empty nerve sheaths are more numerous than medullated nerve-fibers. When these apparently medullated nerve-fibers are examined more carefully they are seen to consist of separate blocks of myelin and are therefore greatly degenerated. Professor Keen was able to positively determine the third division of the ganglion, and this division was kept separate from the pieces of tumor removed. Most of the nerve-fibers in this division are destroyed. (See Fig. 4.) Within the tissue known by the presence of nerve-cells to be a part of the ganglion a medullated nerve-fiber can only occasionally be found, and even these are much degenerated. As this portion of the tissue was hardened in Müller's fluid alone, without the addition of formalin, the failure to detect numerous medullated fibers can not be explained by the technique employed.

At the time of the second operation small nodules a little larger than the head of a small pin were found on the inner side of the dura, somewhat resembling miliary tuberculous growths. They were slightly larger than the tubercles usually seen in cases of miliary tuberculosis of the brain, and they grew from the inner surface of the dura and were not in the cerebral pia along the blood-vesses, where miliary tuberculous growths are more commonly found. These minute nodules of the dura seemed to me to be related to the tumor of the Gasserian ganglion, although they were *on the inner side of the dura* and in no direct connection with the large tumor mass. I expected to find that under the microscope they would have the same structure as the large tumor of the ganglion. This proved to be the case, as one of these minute nodules examined is unquestionably an endothelioma well defined from the surrounding tissue of the dura. (See Fig. 5.) A small piece of dura removed with this nodule was also studied. Its inner surface showed accumulations of cells, some with round and some with oval nuclei, and two of these accumulations examined were separated from one another by nearly normal dural tissue.

The microscopic study of the tissue removed by Professor Keen shows that the growth is an endothelioma invading the Gasserian ganglion, destroying many of its nerve-cells and causing almost complete degeneration of the medullary sheaths of the nerve-fibers.

The tumor is unquestionably an endothelioma, although in some parts the structure is not entirely typical of this form of growth. Endothelioma, according to Birch-Hirschfield,[6] belongs undoubtedly to the connective-tissue tumors, and in some cases a sharp distinction can not be made between it and sarcoma. When the formation of endothelial cells occurs with proliferation of the stroma, it is doubtful, he thinks, whether such a tumor can be classed with the endotheliomas, and it should more properly be called an endothelsarcoma; when the fibrous tissue is excessive it may be called endothelioma fibrosum.

Ziegler[7] says that the alveolar, tubular or plexiform arrangement of the endothelioma is very distinct only in the early stage of tumor formation, and that in later stages the proliferation of connective-tissue cells makes

the tumor resemble a sarcoma. Endothelioma can not therefore be sharply separated from sarcoma.

The tissue removed from the patient is so typical in many places of endothelioma that the growth may be called an endothelioma, although at parts considerable accumulations of round nuclei are found, and at other

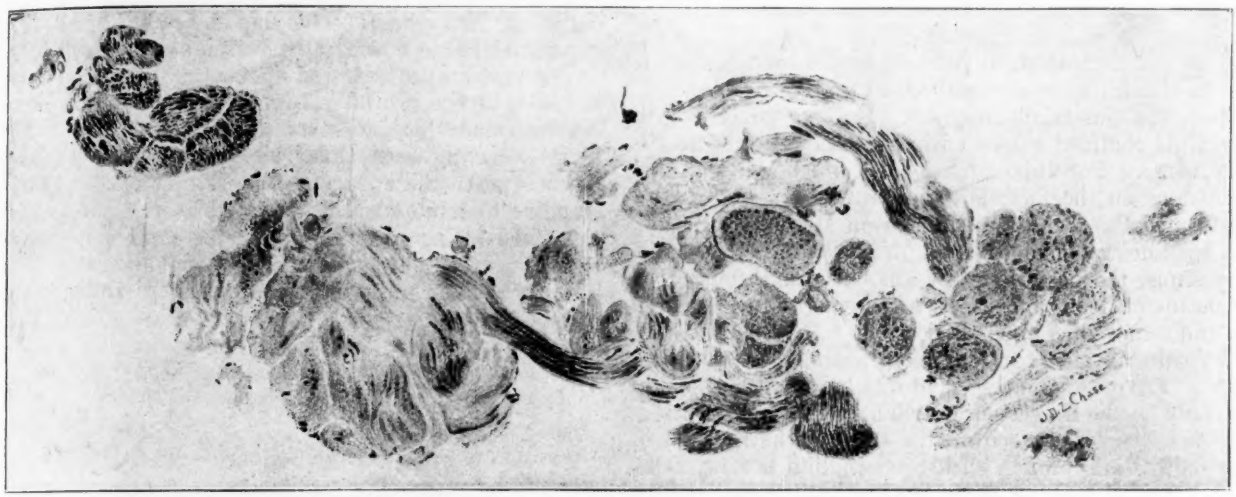

FIG. 4.—The third division of the Gasserian ganglion almost completely degenerated. The black dots and lines indicate the few normal nerve-fibers remaining.

parts much fibrous tissue consisting partly of empty nerve sheaths. In the small nodule removed from the dura the typical structure of endothelioma is seen.

The proliferation in some parts of the ganglion of the nuclei of the cells in the capsules about the nerve-cells is an interesting observation. We might expect these cells to proliferate in an endothelioma of the ganglion. The capsules of the nerve-cells of the spinal ganglion, according to v. Lenhossék[8]—and the same is true of the cells of the Gasserian ganglion—consists of connective

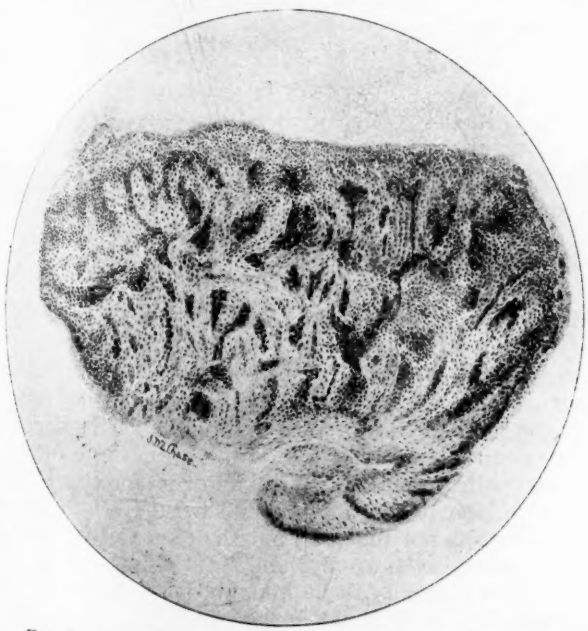

FIG. 5.—One of the miliary endotheliomas on the inner surface of the cerebral dura.

tissue which passes into the sheath of Henle of the axis-cylinder process. This capsule, especially about the larger cells, presents a laminated structure consisting of two or three layers and containing small flat or elongated nuclei. The inner surface of the capsule is lined with one layer of epithelium. In many animals the cells are flattened like endothelial cells, but in man they are quite large and rich in protoplasm and the nuclei are large and round or elliptical. Von Lenhossék at one time believed that a lymph space existed about the cells of the spinal ganglion, but in his study of ganglia removed from an executed man soon after death and hardened rapidly, he found that a pericellular space does not exist. Whether the cells lining the cell capsule are to be regarded as endothelial or not seems undetermined. Their proliferation in an endothelioma might occur whether the cells resemble endothelium or epithelium.

The great degeneration of nerve-fibers of the fifth nerve and the pressure caused by the tumor explain the intense pain felt by the patient, but it seems surprising that objective sensation in the face could have been so well preserved when the medullated fibers were so greatly degenerated. Axis-cylinders deprived of medullary sheaths may have existed, although such naked axis-cylinders are always difficult to detect.

In two excellent papers on endothelioma that have recently appeared (Kelly,[9] Sailer[10]), in which the literature is carefully considered, no mention is made of miliary endothelioma, and Sailer says that endothelioma of the dura is almost invariably benign and rarely gives rise even to pressure symptoms. Dr. Kelly and Dr. Sailer inform me that in their study of the literature on endothelioma they have found no mention of the occurrence of numerous small endotheliomas. Our case of tumor of the Gasserian ganglion caused what may be regarded as numerous metastatic growths and—even more uncommon—miliary endotheliomas. I have also had a case of endothelioma of the cerebral dura in which pressure symptoms were very marked.

BIBLIOGRAPHY.

1. Mitchell, John K.: Jour. of Nervous and Mental Dis., June, 1898.
2. Hagelstem: Deutsche Zeitsch. f. Nervenheilkunde, vol. xiii, Nos. 3 and 4, p. 205.
3. Trénel: Bulletins et Mém. de la Soc. Anatomique de Paris, March, 1899, p. 326.
4. Krause: Die Neuralgie des Trigeminus, p. 101.
5. Homen; Neurologisches Centralbl., 1890, p. 385.
6. Birch-Hirschfeld: Lehrbuch der Path. Anatomie.
7. Ziegler: Lehrbuch der Allgemeinen Pathologie. Ninth Edition. Vol. i, p. 431.
8. v. Lenhossék. Arch. f. Psychiatrie, vol. xxix, No. 2, p. 345.
9. Kelly: The Philadelphia Monthly Medical Journal, February, 1899.
10. Sailer: Contributions from the William Pepper Laboratory of Clinical Medicine.

ACCORDING to the sanitary corps of the War Department the population of the city of Manila is 150,000.

METHOD OF EXPOSING THE GASSERIAN GANGLION: REMOVAL OF THE SUPERIOR MAXILLARY NERVE.*

BY GWILYM G. DAVIS, M.D., M.R.C.S., ENG.

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PHILADELPHIA.

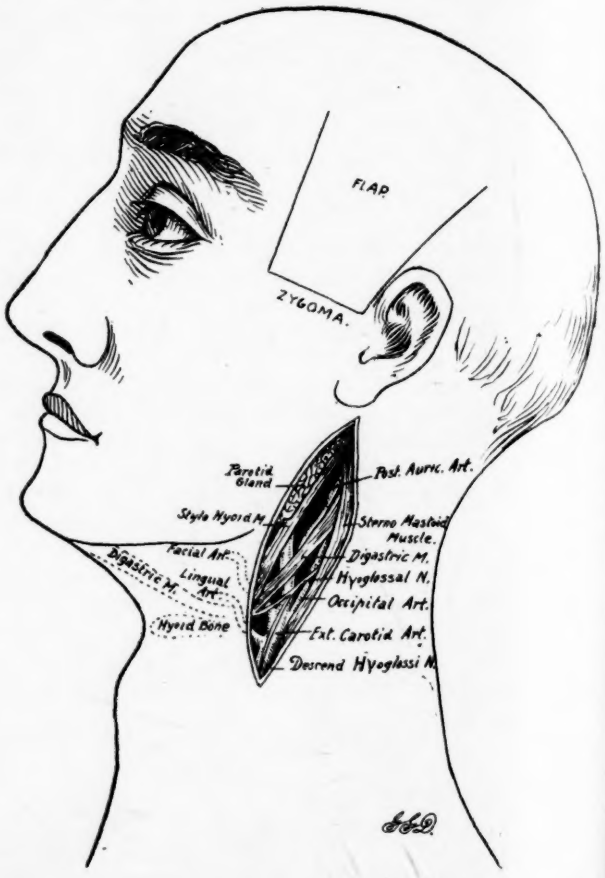
This patient, about 60 years of age, is brought before you to illustrate certain methods of procedure in operating on the Gasserian ganglion. He was affected with neuralgia confined almost entirely to the superior maxillary nerve. For this condition several operations had been done on the face, but the pain having returned I performed Carnochan's operation on Meckel's ganglion. An opening was made in the anterior wall of the maxillary sinus, the posterior wall was chiseled through and by means of hooks and curettes the ganglion was broken up and removed as much as possible. He remained free from pain for three or four months and then had a return. The question arose as to whether an attack should be made on the Gasserian ganglion itself or on the superior maxillary nerve within the skull. The removal of the ophthalmic branch with the ganglion is now, I believe, avoided when possible, and as both it and the inferior maxillary divisions were free from pain I decided to limit my interference to the superior maxillary nerve.

The main difficulties experienced in the operation have arisen from the hemorrhage encountered, and it was to this question that my attention was mainly directed. The bleeding in cutting the flap is considerable, as is also that from the middle and small meningeal arteries and the veins, including the cavernous sinus, in the region of the ganglion. Any bleeding from the sinus was obviated by not interfering with the ophthalmic nerve. To control the arterial bleeding it was decided to ligate the external carotid artery. This procedure was, I believe, suggested by Dr. Fowler.

In ligating the external carotid artery the ligature was placed around it just above the digastric muscle. (See illustration.) The incision was placed behind the angle of the jaw along the anterior edge of the sternomastoid muscle. This was pulled backward and the parotid gland pushed forward. The veins contributing to form the external jugular were pulled forward and the oblique fibers of the digastric muscle came into view: a little parting of the tissues then enabled one to see the hypoglossal nerve below the muscle and winding around the occipital artery to its outer side; to the inner side, coming from the trunk of the external carotid, were the commencement of the facial and lingual arteries. The ascending pharyngeal artery is posterior and may not be seen. Just above the digastric muscle is seen the stylohyoid muscle, and the posterior auricular artery, comparatively small, may be seen winding along the upper edge of the digastric muscle. The stylohyoid muscle was pulled upward, the digastric downward, and the ligature of catgut placed between them on the external carotid artery. This allowed the blood still to ascend to the scalp through the occipital and posterior auricular arteries.

To cut the usual Hartley-Krause horseshoe-shaped flap with its base on the zygoma would be to court sloughing of the flap if the main blood-supply, through the temporal artery, was cut off by ligation of the external carotid artery. Necrosis of the bone and even sloughing of the flap itself have been known to occur. To avoid this a flap of the shape of a truncated cone was cut with its base upward and small end downward. Two longitudinal cuts were made upward, one from the junction of the anterior edge of the ear and the zygoma and the other from the junction of the anterior and middle thirds of the zygoma; these were joined by a transverse cut along the zygoma. This flap embraced the skin and superficial fascia down to the temporal aponeurosis.

The temporal muscle and aponeurosis was then cut in the lines of the two lateral incisions, but the transverse cut was made high up near the temporal ridge. This muscle, having been thus loosened above, was pushed down beneath the zygoma. The skull was opened by a trephine and the opening enlarged by the rongeur forceps. In biting away the bone the middle meningeal artery was torn but gave rise to no troublesome bleeding. The dura mater and brain were then lifted and the superior maxillary nerve exposed as it ran from the Gasserian ganglion to the foramen rotundum. Grasping the nerve as it entered the bone, with a hæmostatic forceps, it was pulled upward. With another forceps it was grasped closer to the ganglion and twisted loose from it. The bone was not replaced, but the temporal fascia and muscle were drawn upward and sutured in place by catgut. The flap was then brought down and sewed in position.



The bleeding during the operation was at no time troublesome. As to the subsequent course, the wounds healed by primary union; there were no circulatory disturbances. The opening in the skull is closed by firm fibrous tissue and the pain has disappeared. The nonreplacement of the bone was suggested by Professor Tiffany, and this case demonstrates that the brain is sufficiently protected without it.

*Read in a Symposium on the "Fifth Nerve in its Neurological and Surgical Relations," before the College of Physicians of Philadelphia, April 20, 1900.

A METHOD OF TOTAL EXTIRPATION OF THE GASSERIAN GANGLION FOR TRIGEMINAL NEURALGIA.*

BY A ROUTE THROUGH THE TEMPORAL FOSSA AND BENEATH THE MIDDLE MENINGEAL ARTERY.

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Of the many diseases which, on therapeutic grounds, are supposed to occupy a border-line position between the provinces of the physician and surgeon, perhaps no one more than intractable epileptiform neuralgia illustrates so well the dictum of that renowned Philadelphian and friend of many doctors, Benjamin Franklin, to the effect that "he is the best physician who knows the worthlessness of the most medicines."

Granting the premise in all cases of true tic douloureux, the neuralgia quinti major of Henry Head, in which all three divisions of the trigeminal nerve are affected, that surgical measures alone can with any degree of certainty be depended on to afford relief from this horrible affliction and that the removal of the Gasserian ganglion must ultimately be contemplated, it is to be regretted that this final procedure should generally be regarded as one hazardous in its performance and uncertain in its permanent effects. Two factors may be held responsible for the ill repute in which the ganglion operation at present stands; in the first place the considerable attendant mortality, ordinarily placed at 20 per cent., and secondly the impression which is prevalent regarding the possibility of recurrence of the neuralgia, an impression which has been occasioned by the reports of cases in which incomplete operations have been performed with a subsequent return of pain.

Almost without exception descriptions of the operation relate in apalling fashion the severity of the hemorrhage which has ensued during one step or another of the procedure, and which has in most instances precluded the possibility of a total extirpation. Granting an equal familiarity with the surgico-anatomic relations of the ganglion semilunare, especially those referable to its dural envelope, the successful accomplishment of its removal, whatever the method employed, will depend entirely on the degree with which an operator may avoid a bloody wound, since a clean dry field is almost a *sine qua non* for the manipulations, which even on the cadaver offer considerable difficulty. The objective point of the operation is necessarily located at the bottom of a close-walled operative well whose depth varies from 5 to 8 cm., and blood-staining even in comparatively slight amount will obscure the ganglion and be incompatible with its complete removal. Consequently, under circumstances which have demanded that the operation be conducted in two or three sittings with periods of tamponade of from two to five days, with possible preliminary ligation of the carotid and almost without exception leaving wounds which have required drainage, there is little occasion for surprise that many operators have contented themselves with division of the second and third branches—N. maxillaris and N. mandibularis—and random removal of the adjoining portion of the ganglion with the aid of blunt hooks or the curette. It has been a not infrequent experience at the hands of those who have been careful enough to submit to histologic examination the tissues removed, under such circumstances, from the supposed site of the ganglion, to find that no ganglionic structure whatever was demonstrable, and that recurrences should be recorded in such instances is no occasion for disparagement of the operation.

Apparently, heretofore in but few cases, notably by Keen[1] and Krause,[2] in Coelho's[3] case and in a few others, has the ganglion been removed *in toto* and as a recognizable entity worthy of histologic study. Relative to photographs of the ganglia removed by Krause and Doyen,[4] Marchant[5] has commented on the necessity of microscopic examination of the tissues removed in confirmation of their presumed ganglionic character. The experience of finding no ganglionic elements in such material has occurred even to operators as skillful as Dr. Keen.[6]

Whether after complete extirpation of the ganglion a continuance or recurrence of painful stimuli of the central system of neurons may follow, must remain a matter of temporary uncertainty, since observations on such conditions have only held over a period of very few years. It is certain, however, from physiologic knowledge of the process of nerve repair, that there can be no peripheral regeneration of the lower system of sensory neurons after the ganglion has been removed, such regeneration as always occurs after division or evulsion of the individual roots and possibly after incomplete removal of the ganglion itself. Experimental evidence,[7] in the case of the spinal cord, goes to show that division of the central axons of peripheral sensory neurons does not preclude the possibilty of physiologic regeneration between a spinal ganglion and the cord. This same principle is applicable to the cerebral sensory ganglia, and in consequence by analogy with the spinal cord it is evident that the simple division of the sensory root of the fifth nerve—N. trigeminus—which procedure has been proposed as an alternative for the removal of the ganglion itself, would be inefficient. The degenerative changes found by Dr. Spiller in the sensory root of one of my cases has aroused a suspicion of possible recurrence of the pain; in this case, however, one in which there was a return of neuralgia a few weeks after two earlier peripheral operations, there has been no sensation of pain whatever since the operation nine months ago. (Cf. Case 1.)

In view of the foregoing data, I believe that it may with propriety be stated:

*Presented at a meeting of the College of Physicians of Philadelphia, April 20, 1900. The subject was illustrated by dissections and photographs of cases. In the present communication the operative procedure alone is discussed. The description of cases with the anatomic and physiologic questions relative to them will be published subsequently.

1. Keen, W. W., and W. G. Spiller: Remarks on Resection of the Gasserian Ganglion, with a Pathological Report on Seven Ganglia. Am. Jour. of the Med. Sci., Vol. cxvi (1898), p. 503.

2. Krause, Fedar: Die Neuralgia des Trigeminus nebst der Anatomie und Physiologie des Nerven. Leipzig, Verlag von F. C. W. Vogel, 1896.

3. Coelho, Sabino; Ablation du ganglion de Gasser avec arrachement protubérantiel du trijumeau dans un cas de névralgie faciale rebelle. Revue de Chir., T. xix., Mai, 1899, p. 623.

4. Doyen, E.: L'extirpation du Ganglion de Gasser. Archives provinciales de Chirurgie. T. iv., Juli, 1895, p. 429.

5. Marchant, Gérard et Henri Herbert: De la résection du ganglion de Gasser dans les névralgies faciales rebelles. Revue de Chirurgie. T. xvii, 1897, p. 287. These writes say in a foot-note, p. 295: "Nous aimerions malgré tout, voir figurer, dans ces observations, a coté de la photographie, le résultat de l'examen histologique. Un ganglion arraché, tordu ou broyé par les mors de la pince est en général assez altéré dans sa forme et peut donner lieu a de certaines illusions. Nous ne pouvons nous empêcher de penser que dans un cas (Dennetiers, *Societe de Chirurgie*, 15 juillet, 1896), ou, d'après son aspect, la partie enlevée ressemblait tant bien que mal a un ganglion, l'examen histologique le plus consciencieux n'a pu déceler la présence d'aucune cellule ganglionnaire. Il en fut de même dans deux cas de Keen.

6. Keen, W.W.: Remarks on Operation on the Gasserian Ganglion with the report of five additional cases. Am. Jour. of the Med. Sci., Jan., 1896, Vol. cxi, p. 59. Case 2.

1. That the probability of non-recurrence bears a direct relation to the degree of entirety with which the ganglion has been removed.

2. That the satisfactoriness of the operation is commensurate with the degree of preservation of the ganglion during its removal and the consequent possibilities of a histologic identification of its elements.

3. That the evolution of the operation must be in the direction of avoidance of hemorrhage which will interfere with the manipulations necessary to successfully liberate the ganglion.

OPERATIVE METHODS IN GENERAL.

A variety of methods more or less familiar have been proposed, by means of which the ganglion may be approached, the two most widely quoted being associated with the names of Hartley and Krause and of William Rose. The fact that Rose, in his original operation,[8] excised the superior maxilla in order to reach the ganglion only emphasizes the terrible nature of the malady which made justifiable such a mutilating procedure undertaken for its relief. In the subsequent development of the operative method by what is known as the *pterygoid route,* which Rose[9] and his followers have adopted, the ganglion is approached from below by a trephine opening at the roof of the zygomatic fossa. If for no other reason than that the ganglion can hardly be removed *in toto* from such a situation, this route should be abandoned, and its uncertainties are evidenced by descriptions of methods by which this structure may be broken up with a curette and thus destroyed.

The methods proposed by Doyen,[10] Quénu,[11] Poirier[12] and other French surgeons with an approach by what is known as a combined *temporo-sphenoidal route,* also possess some of the disadvantages of the method of Rose, for though the exposure is better, the ganglion is approached from below through the bloody area of the pterygoid plexus with necessary ligation of the internal maxillary artery, and after location of the inferior maxillary nerve—N. mandibularis—the roof of the zygomatic fossa is rongeured away to the foramen ovale and an attempt made to remove the ganglion by using this nerve as a guide to its position. Personal experience with this operative method, though limited to the cadaver, has demonstrated that it is exceedingly difficult to remove the ganglion from this situation in a satisfactory degree of preservation, and furthermore, as will be seen, the blood-supply to the ganglion is almost entirely from below and is especially abundant in the neighborhood of the foramen ovale, consequently the difficulties of this method during life must be considerable. Jacob[13] has recently described an operation in which the infraorbital branch—N. infraorbitalis—of the superior maxillary nerve is first located at the floor of the orbit, the skull trephined and the ganglion approached and identified by means of this nerve in much the same way that the inferior maxillary nerve is utilized in the last described procedure, but inasmuch as these nerves are accessible and plainly recognizable within the skull, it seems unnecessary to demand any such preliminary extracranial sign-post to the seat of operation.

The fact, however, that French surgeons since Doyen have clung to the temporo-sphenoidal route, gives evidence that its possibilities are deserving of consideration, but inasmuch as the great majority of operators have followed the lead of Hartley[14] and of Krause[15] by way of the temporal fossa to the ganglion, doubtless their method should be considered as fraught with less danger and as offering better chances of a successful outcome than any other heretofore described, and it is noteworthy that practically by this method alone in an occasional instance has it been possible to completely extirpate the ganglion. There are many difficulties arising, chiefly from hemorrhage, which those who have seen or attempted this operation of Hartley and Krause will remember but too vividly. In the first place, the Wagner osteoplastic flap in the temporal region must be so taken that it includes the sulcus arteriosus in the anterior inferior angle—angulus sphenoidalis—of the parietal bone which lodges the middle meningeal artery, and consequently the vessel, owing to the frequent depth of the sulcus, is quite commonly lacerated and is the occasion of delay long before the real operative seat is reached. Again, when the ganglion is approached, the operator is so far—measuring on the curve of the skull—from the cavum Meckelii in which the ganglion lies, that an amount of elevation of the brain and underlying dura is necessary, which is incompatible with the preservation of the artery at its lower fixed point, namely, at the foramen spinosum. Hence Krause finds it essential to attempt a preliminary double ligation of the vessel after its emergence from this foramen. This is a difficult procedure, and is not uncommonly unsuccessful, and hemorrhage from the meningeal under any circumstances is an unpleasant thing with which to deal.

Disadvantages other than the obligation of dealing with this arterial bugbear arise from the necessary degree of retraction which is essential for a satisfactory exposure of the deeper parts of the ganglion when this high temporal method is employed. On one occasion, in a left-sided case, a consequent aphasia was noted and in most of the earlier operations undertaken by this method no attempt was made to remove more than the outer portion of the ganglion. Had it been deemed necessary on all occasions to expose and liberate the sensory root proximal to the ganglion, I am certain that the employment of this high temporal route would have been found frequently impossible and always attended by grave difficulties.

Even by the method which I have used, in which there is required but slight elevation of the brain, there has been invariably an associated retardation of the pulse. This is illustrated by the accompanying ether chart, which presents characteristics almost identical with that seen on all four occasions in which I have operated.

Victor Horsley[16] has proposed and carried out an operation by this route in which the dura is immediately opened and the temporal lobe itself retracted, leaving the dura covering the middle fossa in place against the

7. Baer, Dawson, and Marshall: Regeneration of the Dorsal Root Fibers of the Second Cervical Nerve within the Spinal Cord. Jour. of Exp. Med., Baltimore, Vol. iii, 1899, No. 1.

8. Rose, Wm.: Removal of the Gasserian Ganglion for Severe Neuralgia. The Lancet, Nov. 1, 1890, Vol. ii, p. 914.

9. Rose, Wm.: The Lettsonian Lectures on the Surgical Treatment of Trigeminal Neuralgia. Lecture ii. The Lancet, Feb. 6, 1892, Vol. i, p. 295.

10. On Extirpation of the Gasserian Ganglion. Ref. Annals of Surgery, Vol. xxiii (1896), p. 69.

11. Quénu et Sibileau: Bull. Ac. Med., 10 Jan., 1894; indorsed by Tichonowitch, Centralblatt für Chir., 24 März, 1900, S. 322.

12. Poirier, P.: Resection du Ganglion de Gasser; arrachement protubérantiel du trijumeau. Gaz. d. Hôp., Par., 1896, lxix, 808-810.

13. Jacob, O.: Un procédé de resection du ganglion de Gasser. Revue de Chir., T. xix, (1899), p. 29.

14. Hartley, Frank.: New York Med. Jour., March 19, 1892. Subsequently—Intracranial Neurectomy of the Fifth Nerve. Annals of Surg., Vol. xvii, 1893, p. 511.

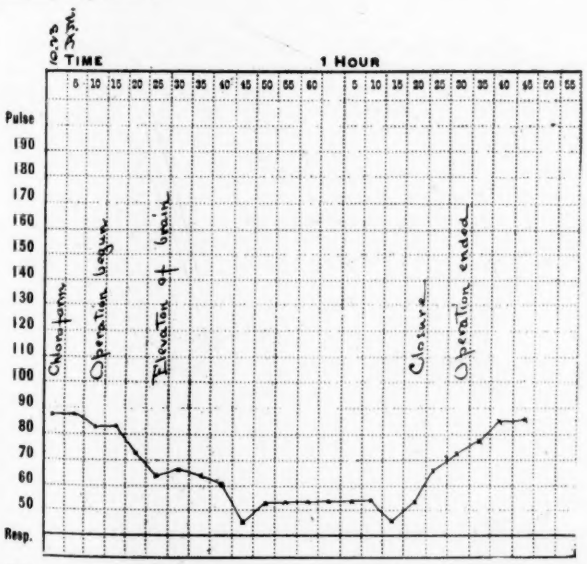
15. Krause, Fedar: Resection des Trigeminus innerhalb der Schädelhöhle. Verhandlungen der Deutchen Gesellschaft für Chir., Berlin, June, 1892, p. 199.

16. Horsley, Victor: The Various Surgical Procedures devised for the relief or cure of Trigeminal Neuralgia. British Med. Jour., Vol. ii., 1891, p. 1249.

bone. Few operators could handle the brain thus freed of its support without injury, and after considerable experience with the removal of the ganglion from above, even when the calvarium and brain have been removed, I have found that greater difficulties are encountered, in spite of the exposure, in freeing it from the dural envelope than will be met with when the approach is from the side, as in the operation to be described.

THE DIRECT INFRA-ARTERIAL METHOD.

The method of enucleation which the writer, with some hesitation, proposes to describe makes use of the paramount advantage of the Hartley-Krause operation, namely that of exposure of the ganglion by the temporal route. The trephine opening through the fossa temporalis, however, is sufficiently low so that the extradural manipulations may be conducted *underneath the arch made by the middle meningeal vessel,* which is retracted with the dura and yet remains uninjured at its two fixed points, namely, at the foramen spinosum of the temporal bone and at the sulcus arteriosus of the parietal. Under this arch with but slight elevation of the temporal lobe the entire ganglion and its sensory root may be exposed. The method may be said to give the maximum of exposure with the minimum of cerebral compression and injury of blood-vessels. The operation, therefore, differs only in its details from that proposed by Hartley and Krause; it is, however, upon detail that the success of this, supposedly one of the most delicate of surgical procedures, depends.



Ether chart of Ganglion Case, showing "five minute" pulse-rate during operation, in illustration of compression pulse due to slight elevation of temporal lobe.

Anatomic Notes.—There are certain anatomic features which must be taken into consideration in this particular operative method, or indeed in any method: in the first place, concerning the dural envelope which encloses the ganglion as well as the intracranial portion of its three peripheral branches.[17]

As commonly described, the dura splits and encloses the ganglion in a double layer as it lies in the cavum Meckelii. This fibrous envelope is closely adherent to the ganglion, and experience has shown that the point at which the layers are most easily separated is at the area of dural attachment about the superior maxillary nerve, where it enters the foramen rotundum. This is the first point at which the simple elevation of the dura is resisted and, by careful blunt dissection, working between this point and that of its second attachment at the foramen ovale, it is found to be a comparatively easy matter to split the enclosing envelope between these two points and to elevate the upper layer of the ganglionic sheath, leaving the ganglion entirely exposed and lying attached to the basal layer of its sheath in the ganglionic fossa. There is, however, in addition to the thick dural layer of the envelope thus elevated, a second, thinner layer of transparent fibrous tissue which overlies and is attached firmly to the ganglion, extending backward over the sensory root—N. trigeminus—but which does not cover the three peripheral divisions as does the rest of the sheath. An attempt has been made to show this second layer in Fig. 2, after its separation from the ganglion, and I am ignorant as to whether this has been heretofore described. After elevation of the main dural sheath and exposure of the three peripheral branches this thin second layer is left intimately adherent to the ganglion, binding it and the sensory root to the underlying tissues. I believe this to be the chief obstacle to evulsion of the ganglion *in toto,* as it is ordinarily attempted.

The importance during the operation of leaving the ganglion attached to the underlying portion of its sheath, and of not elevating it until the final step, is due partly to the fact that it is much less difficult to free it from the underlying surface of dura and bone below than from the elastic cerebral surface, as will be emphasized later, and furthermore because the blood-supply of the structure comes almost entirely from beneath. The chief supply ordinarily comes from a branch of the meningeal soon after its entrance into the skull, and consequently the third division—N. mandibularis—is often the most bloody one to liberate. A small branch usually comes from the carotid and passes over the sixth nerve—N. abducens—to the under surface of the ganglion. Another common branch is a small radicle of the ophthalmic to the first division; another by way of the foramen ovale is the lesser meningeal, and occasionally a branch appears through the foramen rotundum from the internal maxillary artery.

Relative to the middle meningeal artery, it not infrequently happens that the vessel communicates with the lacrimal artery by an anastomotic branch through the outer angle of the sinus sphenoidalis. Occasionally the latter artery may derive, in this way, its main origin from the meningeal, or vice versa the meningeal from the lacrimal. Under these circumstances it can be seen

17. It is superfluous to say that an operation on the ganglion by any route should not be undertaken without perfect familiarity with its anatomic relations, and it is important that this familiarity should be gained by way of the particular method of approach selected. Only after a great number of operations at the autopsy table can one satisfactorily train his reflexes to appreciate the degree of force which it is necessary to apply at the edge of the ganglionic dural sheath in order that it may be split and the ganglion exposed by lifting away its superior covering, and similarly the force which may be applied in the subsequent elevation of the ganglion and its four branches from the underlying dura to which it has been left attached. For this procedure the only instrument which is requisite is a blunt dissector of proper shape, and in the possibilities offered by the one selected, the operator should train himself. Only after repeated operations on fresh cadavers possessing skulls of various indices did the writer feel justified in dealing with the ganglion at the operating-table and confident of removing it *in toto.* To satisfactorily free the entire ganglion is a delicate procedure and familiarity with the crackling sensations imparted to the hand while liberating it from its dural envelope can not be overvalued. I know of no operation which could be undertaken without such preliminary experience with equal rashness. I have found the experience gained from practice on ordinary anatomic material to be unsatisfactory. The toughening of the dried dura and altered consistency of the ganglion and brain imparts, through the dissecting instrument, sensations markedly different from those which are given by fresh tissues. I have performed this particular operation on autopsy subjects about thirty times, and have removed the ganglion in a number of other ways, invariably in a much less perfect state of preservation. It is extraordinary how much easier it is to remove the ganglion through an opening in the temporal fossa by this method than it is through an open calvarium after the brain has been removed.

that the vertical extent of the arch under which we must work is somewhat narrowed. Such an anomaly was met with in Case 4 of my series; it nevertheless did not seriously encroach the field of view.

Another factor may occasionally interfere with the view of the ganglion, one which has been encountered especially in skulls with a broad cephalic index, and this is the more embarrassing since the ganglion in such brachycephalic cases may lie from 1 to 1½ cm. deeper than usual. This obstruction consists of a bony prominence which, in slight degree, is present in all skulls, but at times is sufficiently developed to partly hide the ganglion when viewed from the side and to ward off the curved blunt dissector in its approach to the ganglion. This process, apparently unnamed,[18] is more or less developed in all skulls and is roughly indicated by the elevation at the lower rim of the operative foramen in the drawings that accompany this paper. The process is situated to the outer side and slightly anterior to the foramen ovale on the greater wing of the sphenoid between the row of sphenoidal foramina and the sutura sphenosquamosa. In Case 2, a patient with a markedly brachycephalic skull, it was necessary to chisel off the top of this prominence before the ganglion could be attacked. A similar and still more developed bony protection renders the ganglion operation in dogs almost impossible.

Underlying the lower sheath of the ganglionic envelope posteriorly there is usually to be made out a dense triangle of fibrous tissue which partly covers the foramen lacerum and under the anterior edge of which the carotid artery emerges. Over the artery and close to the edge of this ligamentous structure, and consequently near to the inner edge of the ganglion, the sixth nerve—N. abducens—passes. It is in this situation, on account of the diminished likelihood of injuring the sinus cavernosus, which is only expressed farther forward, that I have preferred to attack the ganglion and its sensory root when it becomes necessary during the process of liberation to pry the structure outward in order to free the attachments of its inner border. I have been able in this way to avoid injury of the sinus and to remove the first division—N. ophthalmicus—by freeing it from behind forward, though I have invariably caused a paralysis—fortunately only temporary—of the sixth nerve. Injury to the sinus, however, is not such a calamity as is usually presumed. An interpretation of its character is given in Spalteholz' Handatlas der Anatomic (Zweite Auflage, 1899, Bd. ii, S. 397 und 441), which is much less startling to an operator than the manner in which it is usually depicted as resembling the other cranial sinuses.

DESCRIPTION OF THE OPERATION WITH DISCUSSION OF THE VARIOUS STEPS.

1. *Formation of muscle flap and exposure of the temporal fossa.*—A horseshoe-shaped skin incision is made in the temporal region, its base about 4 cm. in breadth, corresponding to the zygomatic arch, and its convexity reaching about 5 cm. above it, but slightly higher than the level of the pinna of the ear. (Cf. Fig. 3.) The incision, therefore, needs to be much lower and may be considerably smaller than that for the Wagner osteoplastic procedure as adopted by Hartley and Krause. This skin flap is turned downward, some branches of the temporal artery being divided in the process, until the underlying temporal fascia is exposed well on to its attachments to the zygomatic arch and the posterior or temporal border of the malar bone. An incision is then made through the temporal fascia concentric with and just inside of the skin incision, and at the base of the skin flap it is carried along the middle of the outer surface of the zygomatic arch through the periosteum down to the bone. The periosteum is then elevated from the bony arch, leaving the masseteric attachment at its lower edge uninjured, and the zygomatic processes of the malar and temporal bones (Cf. Fig. 1) are divided with heavy forceps as in the resection of a rib. An incision concentric with the skin incision is then carried down through the temporal muscle, and the muscle is scraped away from the bony wall of the temporal fossa, to which it has no attachment in this situation, and retracted downward together with the resected portion of the zygoma and into the space which this bony arch formerly occupied. (Cf. Fig. 3.) In this way the lower portion of the temporal fossa of the skull, as far down as the attachment of the external pterygoid muscle below the infratemporal crest, is well exposed.

Discussion of Step.—The one deformity consequent to the operative method via the temporal route follows upon the incision through the temporal fascia, namely, the division of the branches of the facial nerve which supply the occipito-frontalis muscle. As a result, there is a post-operative inability to elevate the eyebrow on the affected side. This paralysis, however, is not apparent during expressional rest except in old individuals in whom there may be some resultant smoothing out of the cutaneous wrinkles on that side. This deformity is well shown in the photograph of one of Krause's patients. (Op. cit. S. 44, Abbildung 14.) I have found that it is necessary to temporarily resect the zygoma in order to satisfactorily retract the temporal muscle. A downward displacement of the bone, of only a centimeter or two, is all that is required to make room for the muscle, which otherwise would arch up over the zygoma and prevent proper exposure of the lowest portion of the fossa temporalis. It is easier to preserve than to detach the bony fragment, on account of the firm attachment of the masseter. This is not a necessary detail, however, and perhaps it would be advantageous to remove it. A new zygoma in one of my cases has reformed after excision, and possibly in this case there is less post-operative deformity since the atrophy of the temporal and masseter muscles shows less plainly than in the other cases in which the arch of the replaced zygoma seems unduly prominent on account of the sunken fossæ above and below it.

2. *Exposure and elevation of dura as far as the ganglionic sheath.*—With a mallet and gouge, a small trephine opening is made through the most prominent portion of the exposed great wing of the sphenoid, and with rongeur forceps this opening is enlarged to a diameter of about 3 cm., its lower margin being carried well down and possibly including the ridge between the temporal and zygomatic fossa—the crista infratemporalis. The uninjured middle meningeal artery runs on the dura thus exposed, across the opening in the bone as the diameter of its circle. (Cf. Fig. 1.) The dura, with this vessel, may then be easily lifted, almost bloodlessly, from the base of the middle fossa until the first point of firm dural attachment at the foramen ovale is reached.

Discussion of Step.—It has seemed unnecessary to the writer to attempt to make an osteoplastic flap even were it possible to deal with it in this deep situation, for the reason that the opening to be made through the skull is so small and after-closure of the wound so well protected. It is possible, indeed that new bone is subsequently formed to cover the defect, since the slight pulsation of the flap which is apparent for some time after the operation ultimately disappears. It is well to make the first opening in the bone at the upper part of the proposed area of removal, since, it is easeier to bite away the bone with the rongeur forceps in a downward direction, and furthermore, because as the base is approached the sphenoidal wing becomes much thicker—occasionally 5-6 mm.—and consequently is less easily penetrated with the mallet and chisel. Care must be taken in the use of the gouge, since the bone is at times exceedingly thin and one or two strokes with the mallet will carry the instrument through. Additional

18. One might presume to call this the processus fasciel cerebralis ossis sphenoidalis according to the His nomenclature.

care is necessary for the middle meningeal artery is usually exposed by the first small opening in the skull. It ordinarily runs beneath the most prominent part of the wing of the sphenoid and squamous portion of the temporal bones, which have been uncovered, and this is naturally the point selected for the primary opening.

It is important in view of preservation of the ganglion and avoidance of possible injury to the deeper vessels that no fragments of bone be allowed to fall down between the skull and dura, since at a later stage of the operation, when it is necessary to firmly press pledgets of gauze against the ganglion to check the bleeding from its underlying arterioles, these spiculæ may, as occurred in one of my cases, be firmly driven into its substance. By a similar accident one of them might be driven into the sinus. Occasionally the prominence, which has been described above, as present on the floor of the fossæ, may be of sufficient size to later interfere with a satisfactory approach to the foramen ovale. This may then be chiseled off or the floor of the fossa rongeured away so as to include it. In the drawings, I have not made the trephine opening quite low enough. It should be carried down so as to include the crista infratemporalis, which therefore should not be shown preserved as in Fig. 1.

3. *Elevation of dura with meningeal artery and exposure of upper surface of ganglion.*—By careful blunt dissection with the proper instrument, and by working at the dural attachment about the foramen rotundum and in the line between this point and the foramen ovale, where it is again firmly attached, the edge of the dural envelope which encloses the ganglion and its peripheral intracranial branches may be split, and by careful elevation the entire upper surface of the stellate structure be exposed well back on to the sensory root, the ganglion being left in its bed still adherent to the underlying portion of the envelope.

Discussion of Step.—This procedure should be attended with but little hemorrhage, since the blood-supply, as heretofore stated, is from below. It is of importance that *the ganglion should not be elevated in this maneuver,* since it is advisable to postpone what degree of hemorrhage is unavoidable as long as possible, and furthermore because it is much easier to elevate the overlying dural sheath from the ganglion if its attachments to the unyielding base have remained uninjured. This entire procedure is carried on under the arch made by elevating the temporal lobe and its overlying dura and artery. A simple spatula of about 2¼ cm. in width, which can be bent at the proper angle, makes the most satisfactory retractor for these structures. (Cf. Fig. 3.)

4. *Liberation and extraction of ganglion and its branches.*—After the exposure of the upper surface of the ganglion and before division of any of the peripheral branches, these three nerves with the ganglion and trigeminal root should be liberated from the attachments to the base. (Cf. Fig. 2, right side.) This is readiy accomplished by working with the blunt dissector in the crotches between the second and third divisions and also along each side of the nerves. After the ganglion and the second and third divisions have been liberated and can be lifted up by the dissector, it is necessary to free the superior and internal edge of the trigeminal root and first division. It is well to conduct these manipulations as near as possible to the sensory root, since that is the safest point and one at which there is less likelihood of injuring the cavernous sinus and sixth nerve. The ganglionic structure may thus be completely liberated (as shown in Fig. 2) without division or laceration of a single branch. With a firmly locking pair of hemostatic forceps—I have used Kocher's—the structure may then be grasped just back of the site of the true ganglion on the trigeminal root; the three peripheral divisions are in turn held up with a blunt nerve hook and divided with scissors close to their foramina; the sensory root is then evulsed by means of the previously attached pair of forceps.

Discussion of Step.—This part of the operation is the most difficult and the one in which preliminary training on the cadaver is found most essential. The degree of force necessary to separate the ganglion without injuring it, for if lacerated or torn away from its roots its extraction becomes most uncertain, can only be learned by experience which should hardly be gained at the expense of the patient. The operator's reflexes should have become familiarized with the crackling sensations imparted to the hand on separating the adhesions at one point or another during the process of liberation. The bleeding which follows on the maneuver, especially about the foramen ovale, is sometimes very annoying but ordinarily may be checked in a few minutes by the pressure of a pledget of gauze. It would naturally be supposed that the proximity of the meningeal and its fixed point at the foramen spinosum would be an embarrassment, especially when an attempt is made to liberate the third division by insinuating the elevator under the posterior border of the nerve—N. mandibularis—between it and the artery. This I have not found to be the case.

I do not see how the third and fourth nerves can be injured in this procedure; the sixth, however, lies very near the ganglion, has always been seen and, I must confess, injured in each of my four cases. This, however, has fortunately occasioned only temporary symptoms, the resulting internal strabismus having disappeared in each case in the course of a few weeks. In one instance I felt certain that I tore the nerve across; if so it must have regenerated. There has also resulted in all of my cases a temporary paralysis of the sympathetic with contracted pupil. This has invariably disappeared much earlier than the motor paralysis of the abducens. As stated above, it is well in the liberation of the first division—N. ophthalmicus—to free the nerve at the ganglionic end and to strip it out from behind forward if it is desired to remove it at all, else the cavernous sinus may be injured. This accident, however, is by no means such a calamity as it is credited with being. The sinus is not an open canal, as usually believed, but made up of compartments in which local thromboses may occur readily and promptly, and thus hemorrhage be controlled by a few moments of pressure. Bleeding from the small ganglionic arteries about the foramen ovale may be much more annoying. On one occasion I accidentally plunged the dissector directly into the sinus anterior to the ophthalmic border of the true ganglion. The profuse momentary hemorrhage ceased after a few moments of pressure with some gauze. The trigeminal sensory if properly extracted invariably comes away from the pons where it is loosely attached. I have never seen any evidence of shock consequent upon this procedure such as Horsley describes in his single case.

5. *Closure and Dressing.*—The zygoma and flap of skin, muscle and fascia are replaced. The zygomatic arch in my first case, as stated, was removed, and in one of the later ones wired in position. This is an unnecessary detail inasmuch as the masseter is paralyzed and the resected portion of the bone when replaced remains in position. The temporal muscle and fascia are secured in place by fine interrupted sutures at the upper curve of the incision, and a few sutures are taken in the divided periosteum and fascia over the replaced zygomatic arch. In applying the dressing the eye is covered by a large sheet of rubber protective which bridges across from the nose and forehead to the malar prominence of the cheek and prevents the pressure of the bandage against the eye. In none of my four cases has the wound been drained, and in none has there been failure to obtain healing by primary union: the resulting scar has been very slight (Cf. Fig. 4), and in one instance hardly to be detected. An unsightly scar, such as is shown in many photographs of cases, would almost deter a surgeon from the operation.

I have not found it necessary to suture the lids as has been advocated, in treatment of the eye. In fact, I should think the local reaction resultant to this procedure would be detrimental in case there was an ensuing keratitis, which apparently is at times unavoidable. The simple protective method which has been used is shown in the accompanying photograph of one of the patients.

The eye is thus kept moist, protected from dust and the patient may deemly see through the covering. A Buller shield answers the same purpose.

It is not the writer's intention on this occasion to take up the physiologic aspects of the four cases which have been operated on, nor to report the histories in any detail, except in so much as they may be of value in interpreting the pathologic lesions, to be described by Drs. Barker and Spiller. The physiologic question relative to disturbances of taste and of secretory activity in the trigeminal area, the consideration of the post-operative areas of sensory anesthesia, the discussion of the so-called trophic changes consequent on removal of the ganglion, and similar topics, must be left to a subsequent communication in spite of the fact that they doubtless represent the most interesting side of the Gasserian ganglion question, and one which is second only in importance to its pathologic aspect. The photographs show that in each instance the ganglion and intracranial roots have been completely removed and the resulting anesthesia has been absolute over the entire area of trigeminal sensory distribution in consequence. The completeness of the post-operative anesthesia may be regarded as an index of the totality of the extirpation.

Fig. 4. Photograph of Case 4, taken on the tenth day in illustration of a method of protecting the eye.

Fig. 5. Specimen from Case 1. (Dr. Spiller). Photograph was taken from the fresh tissue and consequently shows points of high light. The first division (I), (N. ophthalmicus) was removed as a separate piece after extraction of the ganglion and other branches. The tissue was placed in Muller's fluid one half hour after removal.

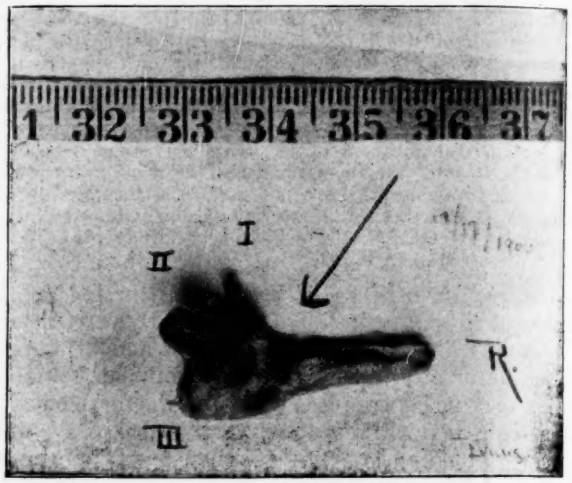


Fig 6. Tissues removed from Case 2. (Dr. Spiller). The arrow indicates the direction of application of the evulsing forceps, whose imprint shows upon the ganglion. Photograph taken from specimen after hardening in formalin, and high lights as in Fig. 5, from reflection of fresh tissues do not appear.

Fig. 7. Specimen from Case 3. (Dr. Spiller). The arrow points to the line of impress of the evulsing forceps. The third division (N. mandibularis) is considerably lacerated as an unsuccessful attempt was made to evulse this from the foramen ovale instead of dividing the root as usual. Shreds of the motor root can be seen distinct from the rest. The first division (N. ophthalmicus) was torn away from the ganglion during its elevation and was removed from the wall of the sinus after extraction of the ganglion. Photograph taken after hardening in formalin.

It will be noted that the ganglia of the first two cases examined by Dr. Spiller were removed during a period

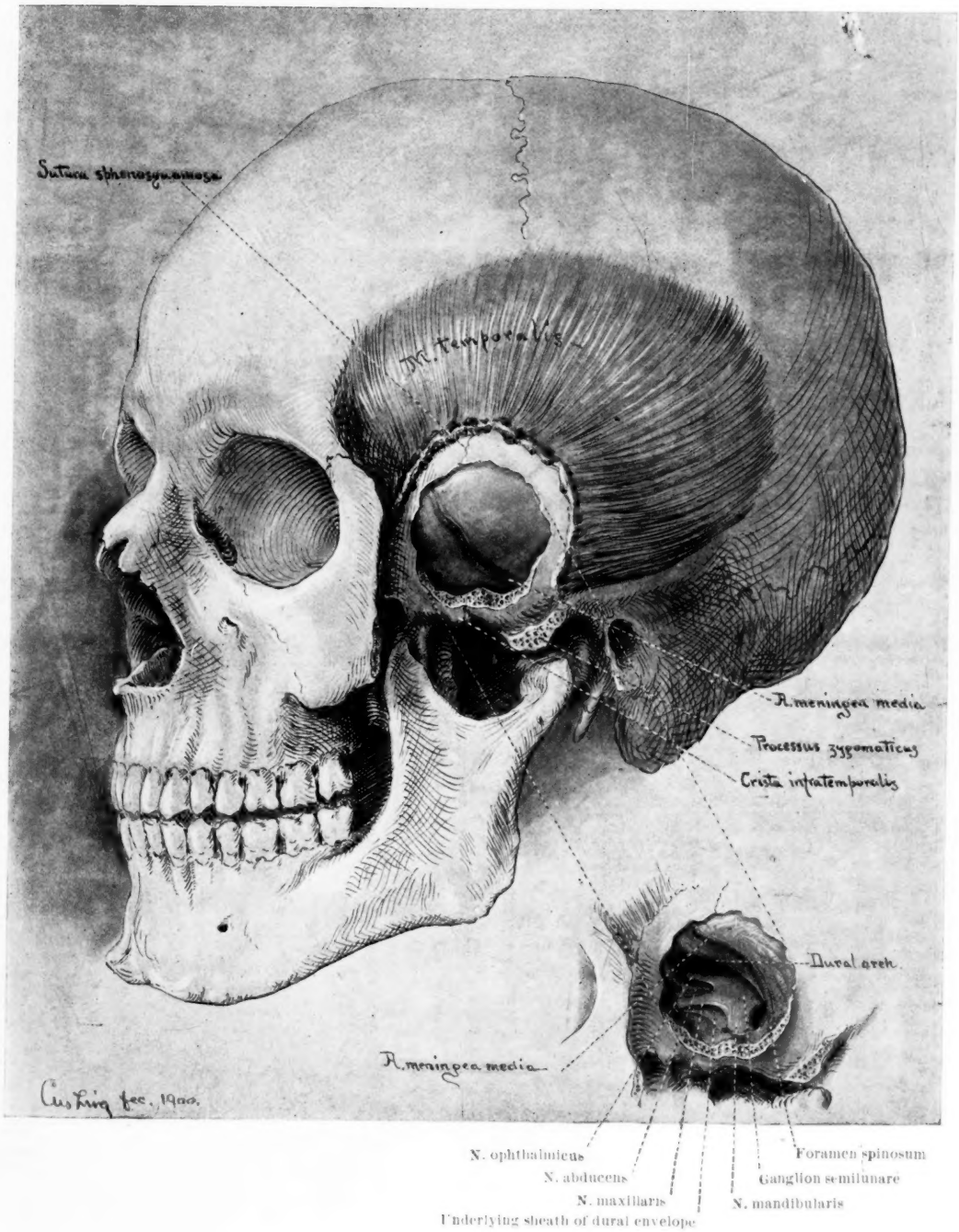


FIG. I.—Showing relations of the middle meningeal artery to the operative foramen before and after elevation of the dura and exposure of the ganglion.

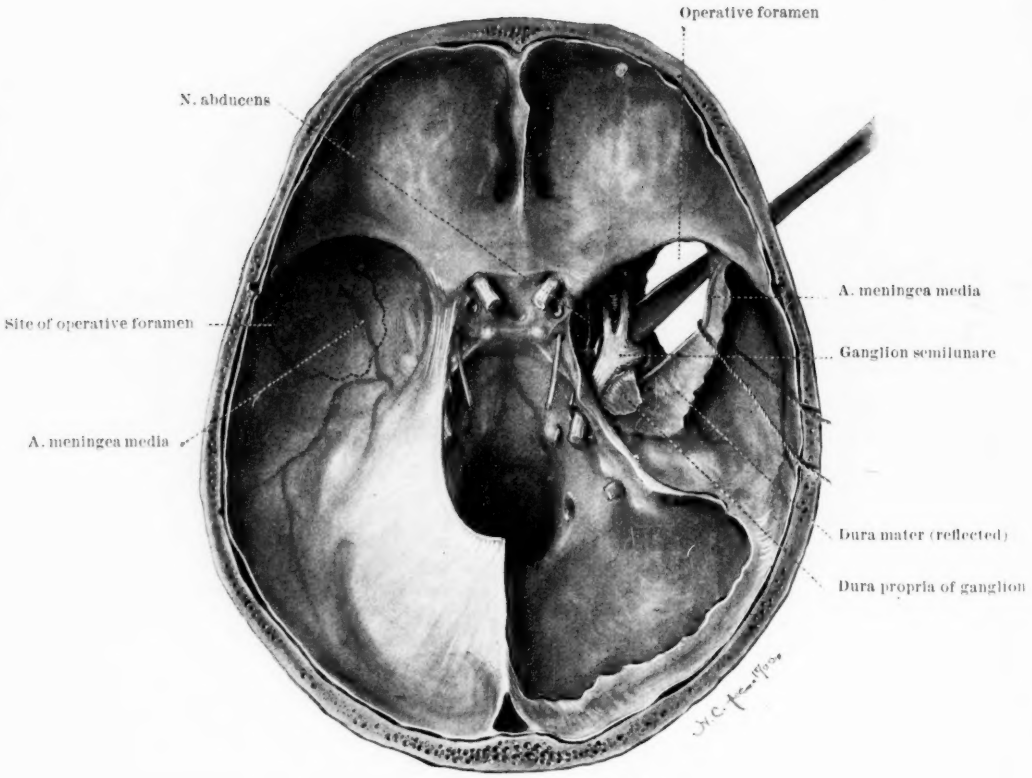


FIG. II.—Showing, on the right, after reflection of the dura, the ganglion and its intracranial branches liberated from their dural envelope and elevated by the blunt dissector introduced through the operative foramen; on the left, the dura in situ and the relation of the operative foramen to the ganglion and middle meningeal artery.

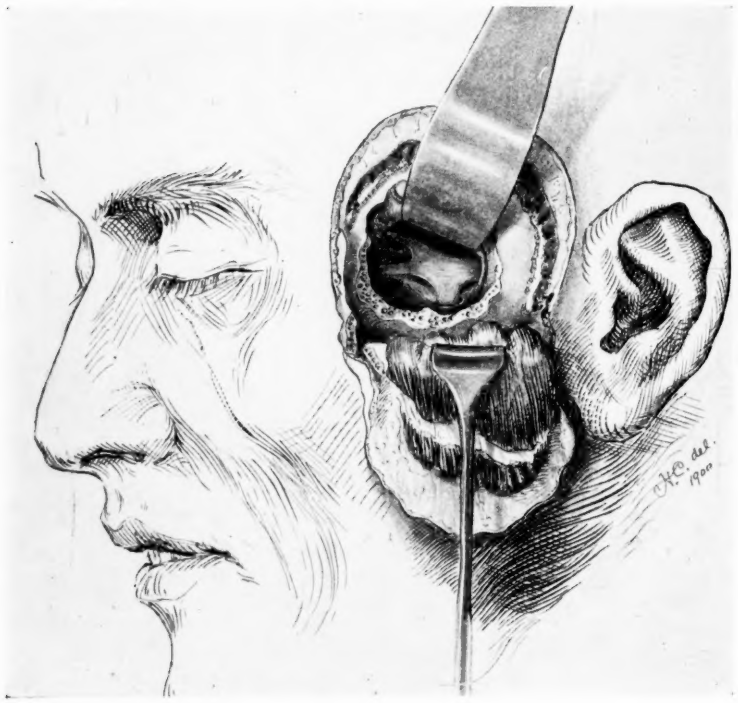


FIG. III.—Sketch from cadaver of the field of operation; showing situation of the incision, retraction of temporal muscle over displaced zygomatic arch, osseous foramen and final exposure of ganglion under meningeal arch.

of extreme exacerbation of the neuralgia. In Dr. Barker's cases the operation was performed during a period of comparative freedom from pain. Brief summaries of the histories preceding the operative period are as follows:

CASE 1.—James W., 63 years of age, entered the hospital Aug. 2, 1899. He had been a sea captain by profession until the onset of his right-sided neuralgia, from which he had suffered for ten years. The pain occurred originally in the third division of the trigeminus. In July, 1896, and again in June, 1897, two peripheral operations with evulsion of the infraorbital and inferior dental nerves had failed to give him more than a few weeks of respite from pain. For the two years before entrance he had been bed-ridden, and his sufferings had had no remission. At the time of operation his extreme paroxysms occurred every minute and a half on an average, and with only slight relief during the intervals. His chief point of radiation of pain was just below the outer corner of the mouth. From there the pain spread into the territory of all three divisions of the N. trigeminus during the paroxysms, to terminate at a point near the parietal eminence. The ganglion is shown in the accompanying photograph (Fig. 5).

CASE 2.—W. E., 55 years of age, entered the hospital Dec. 17, 1899. He had been a business man until neuralgia interrupted his activities. He had suffered from pain, which appeared primarily in the distribution of the infraorbital branch, for twelve years. In 1892 the infraorbital nerve was evulsed,

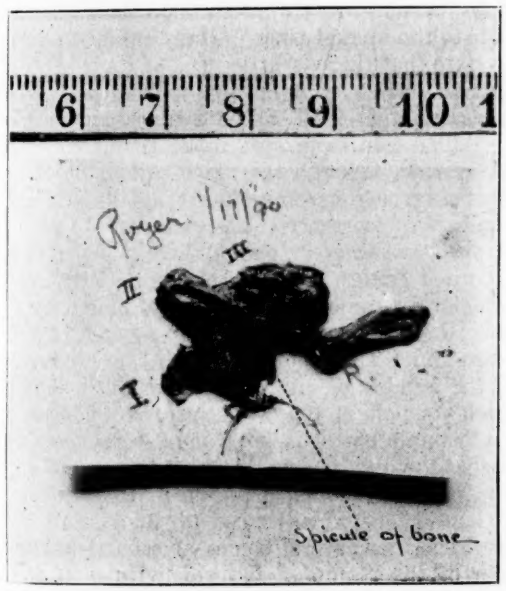


Fig. 8. Specimens from Case 4. (Dr. Barker). A spicule of bone is shown driven firmly into the ganglion, which was not removed in a good state of preservation. The sensory root (R), (N. trigeminus) tore away from the ganglion during extraction and was subsequently removed. Photograph taken after hardening in formalin.

with relief for several months. On the return of pain, the inferior dental became involved, and subsequently the supraorbital region and pain finally extended to the territory innervated by the suboccipital nerves. His sufferings for several months before entrance were such that he had been in confinement and, on admission to the hospital, he was practically maniacal. His chief pain point from which the paroxysms radiated was situated in the right nasolabial fold. His sufferings were continuous, with exacerbations every few moments, or consequent on the slightest peripheral stimulus. The ganglion and branches are shown in the accompanying photograph (Fig. 6).

CASE 3.—A. D., 38 years of age, a shoemaker by trade, entered the hospital in January, 1900, having suffered from trifacial neuralgia for only two years. The onset was attributed to exposure and pain, and was at first limited to the supraorbital area. One year later the infraorbital region became involved and soon the whole territory of the third division, the pain during the paroxysms extending into the suboccipital region. In March, 1899, by peripheral operations, I evulsed an inch or two of the inferior dental and infraorbital nerves, which showed the usual histologic changes after being removed. After relief for eight months the pain returned—November, 1899—with renewed vigor. The paroxysms at the time of entrance were not frequent nor very severe. The pain spread downward from the supraorbital division into the territory supplied by the second and third branches. The patient was operated on during this interval of comparative freedom. The ganglion is shown in Fig. 7.

CASE 4.—Elizabeth R., 60 years of age, had suffered for seven years from left-sided tic-douloureux, which originated in the superior maxillary branch of the trigeminal nerve, and was attributed to exposure. The definite point of origin of her paroxysms had always been situated near the ala of the nose. In August, 1897, 5 cm. of the infraorbital nerve was evulsed (Cushing) from the floor of the orbit. The nerve histologically showed the usual degenerative changes. Relief ensued for sixteen months, after which interval, with the return of pain the first and third divisions became invaded. In June, 1899, the regenerated nerve from the same situation was again evulsed (Mitchell) with subsequent relief for only four months. In January, 1900, the ganglion and roots were removed *in toto*, though with considerable difficulty and not in a good state of preservation. (Cf. Fig. 8.) The operation was performed during a period of comparative freedom from pain.

(This Symposium will be concluded next week.)

MEDICAL ETHICS AND MEDICAL JOURNALS.*

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To most of us the average paper concerning our intraprofessional relations is somewhat tiresome. In many quarters the dignity of medical ethics has been most loudly preached by those lacking experience in its practice. It is little to be wondered at, therefore, that the subject is not a popular medical society topic. Despite this acknowledged fact, I have determined to present some desultory thoughts concerning a subject that seems to me to be so important to the welfare of medicine as to deserve most earnest consideration. Duty may not be shirked because it is unpleasant.

Physicians are to-day face to face with many vital questions that can not be indolently ignored. Sapping professional honor to its very vitals is the matter of the giving of commissions for referred cases by the specialist to the general practitioner, involving as it does the points as to whether medicine is a profession or a trade, and as to whether our patients are sentient beings or mere purchasable and transferable commodities. From this and other problems the present paper turns to some consideration of the shocking abuses that have sprung up in the realm of medical journalism. Even as the specialist, from greater opportunity, is permitted to assume the possession of superior knowledge and experience in his chosen branch, so may, perchance, the medical journalist be permitted to offer some expert testimony as to the evil tendencies that he is forced constantly to observe.

The profession is not alive to the damage that it is suffering in the eyes of the world by reason of the present degradation of American medical journalism. As peoples, races and communities are judged by their literature, so is the profession of medicine perforce judged in large measure by its books and its journals, especially the latter, because it is presumed that they more accurately reflect the sentiment of the average readers. Admittedly the topic is not new, but honest facts will bear restating.

There are now published in this country some 250 medical journals of all kinds. Does the profession demand so many? If not, why are they issued? and how do they live? Many—including some of the best known—are owned by great publishing houses that are frankly

*Read, by invitation, before the Northwestern Ohio Medical Association, Dec. 7, 1899.

engaged in the effort to accumulate wealth, both directly from their journals and indirectly from the books and other wares that they therein advertise. In the management and course of these publications the profession has little or no voice. Their editors—while they are medical men—have often to submit their judgment of propriety in editorial conduct to the commercial exigencies of the owners. Other periodicals are owned openly or covertly by proprietary-medicine makers, and their object is too obvious to need expression. Still others—too many, in sorrow be it said—are conducted by men of our own profession, whose sole object is self-exploitation, and whose aim is not for an honorable paid subscription list, but for profitable consultation cases. Only a small proportion of our journals are conducted by high-minded men whose single aim is the upholding of the honor of medicine and the directing of professional thought toward elevated ideals. It will thus be seen that medical journalism is in a state of chaos. Close observation shows that there are few medical journals that can not be bribed into defrauding their readers in one way or another, and it is not alone the least among them that sin chiefly in this respect.

There being such a multiplicity of journals, few of them could live alone on their subscription receipts, and the pharmaceutic firms are appealed to for advertisements. The greed for advertising patronage leads the editor only too often to prostitute his pen or his pages to the advertiser, so long as he can secure the coveted revenue. So our journals are filled with articles and editorials containing covert advertisements of this and that remedy. So great has this abuse become that many drug houses—few of the better ones be it said to the credit of the trade—will not deal with a journal that does not, in the advertising contract, agree to publish, in addition to the advertisement in its proper place, and without extra compensation, certain advertising matter among its original articles or editorials. This trick the profession well knows, and already it shows signs of failing of its object, for the physician becomes disgusted with the journal that so demeans itself, and suspicious of the firm that can not be satisfied with placing its wares honestly before the profession in a frank advertisement. Happily also there are signs that the manufacturer is beginning to see whither this practice tends, and to fear the inevitable loss that will shortly follow, when the profession refuses to longer support the journals that thus soil their pages and deceive their readers, or to buy from firms that deal in deception.

In a clever editorial, the *St. Paul Medical Journal* for November, 1899, frankly divides journals and advertisers into two classes—the honest and the dishonest—and adds that the honest journal rigidly segregates its scientific matter from its advertising pages, and that the honest advertiser appreciates the value to him of space in the honest journal, as the means of attracting to his wares through a plain advertisement the best professional attention. This courageous editorial writer then says: "Granted the above standard of honesty is correct . . . there are not a dozen honest medical journals published in the United States to-day." This statement is sweeping, but it is lamentably true. One of our leading journals has several times in the past year published as scientific matter papers concerning the merits of different proprietary articles, whose importance is far from deserving such attention and whose qualities are much better described in an advertisement. One of these papers was written by a well-known medical author and teacher, and was subsequently republished—to the chagrin, let us hope, of its reputed author—among the advertising pages of a homeopathic journal. Naturally the *St. Paul Medical Journal* wonders how much the author was paid by the firm whose product was thus advertised, and also how much the journal received for the prostitution of its pages to commercial greed.

To-day most journals carefully refrain from expressing any opinion upon many of the important and disputed matters of personal conduct that appertain closely to the physician's life, and some even do not hesitate to vilify those few journals that dare to raise a voice in favor of honorable conduct.

The existence of evil tendencies, however, does not suffice for the sweeping condemnation of all that is. Conspicuous examples of the extraordinary commercial and moral success of journals that do not fear to speak the truth, nor hesitate to condemn that that is evil, while urging the desirability of clinging to that that is good, give rise to a well-founded conviction that immorality in journalism is not what the profession expects from its editors. There is a keen demand for clean ideals and for free condemnation of patent venality.

The flood of sample copies of cheap medical journals on the doctor's desk has become so irresistible that the legitimate journals are all but swamped in the undertow that leads to the waste-basket. Many careless physicians frankly state that there is little need of their subscribing for journals, when complaisant journalists will keep them well supplied with periodic literature free of all expense. The tide seems yet to be rising, as one new medical journal, through the naive statement of one of its advertising patrons, announces that during its first four numbers of existence it has guaranteed to deliver a copy of one issue to every one of the 125,000 physicians of the United States. Others asseverate that they possess suspiciously numerous thousands of paid subscribers, when one doctor who pays for the paper is extremely difficult to find. If any one of you will for a month keep tally of the number of sample copies of medical journals that reach your office, you will be astounded at the total. Yet the "sample copy" is not wholly reprehensible, for it furnishes the only means by which the reputable journal may indubitably submit its merits to your scrutiny. But the honest journal will not send you a "sample copy" of every issue, nor several copies of each issue, and the character of the "sample," as evident to even brief inspection will unequivocally determine whether the copy comes honestly seeking your support for a meritorious undertaking or sneaks into your office to delude the advertiser into the belief that you are a regular subscriber.

The foregoing cursory review of the present status of medical journalism leads naturally and logically to the question: "What is the proper aim of medical journalism?" On the answer to this question depends our conclusion as to the ethics of the problem in hand. Probably few physicians ever stop to consider the reasons for the existence of medical journals, or to formulate, however loosely, the principles that should govern their conduct. To give what is hoped to be a clear answer to this question, to clarify the profession's vision in the premises, and to aid, if never so little, in educating the professional conscience to the appreciation of journalistic evils and of the remedies that may be applied to the existing unfortunate conditions, is the object of this paper. There are certain reasons for the existence of medical journals that are constant and unvarying, and—once appreciated—they render easy the application to all cases of the test of legitimacy and usefulness.

Medical journals should be conducted only for the at-

tainment of the following objects: The prompt diffusion of medical knowledge, the furnishing of a ready means for the intercommunication of professional thought, the elevation of professional morals, the binding together of the medical profession into one harmonious organism, the representation of the best medical thought with the effort to raise the intellectual and moral qualifications of the entire profession to that level, and the extinction of sects and of all unreason in the art or science of medicine. The publication whose course does not conform to these standards has no excuse for existence. It is necessary, therefore, that physicians should know the earmark of the good and of the bad among medical journals, in order that intelligent and discriminating choice may be facilitated.

Like trees and men, medical journals may be distinguished by their fruit. First and foremost eschew instantly every journal that intermixes its original matter with advertisements—such journals are not conducted for any good purpose, and do not meet any of the indications given above as adequate reasons for existence. It is manifestly incumbent on reputable journals to furnish to their readers reliable information of the worth of new pharmaceutic preparations; and not all proprietary remedies are to be ruthlessly and unreasoningly condemned. Nevertheless, beware of that journal that repeatedly publishes cheap reports of limited experience by unknown authorities with remedies that are rightly regarded by reputable physicians with more or less suspicion, because of secrecy of composition or brazenness of exploitation. Such reports and experiences are of no value to the profession, and only those dealing with reputable and ethical pharmaceuticals are worthy of attention. The drug makers will soon learn that the profession is not to be hoodwinked by paid puffs published as original articles in cheap journals. The day for receiving large returns from that method is happily nearly gone, but it should be hastened by all physicians unanimously refusing to read or to be influenced by such articles, or to receive further copies of the journals in which they appear. The application of this remedy will greatly reduce the number of "fake" medical journals. If the profession could only realize the extent to which medical editors are constantly being importuned—even threatened—to cheat their readers by publishing as original matter articles that have been purchased or cajoled from frail or recreant doctors, there would be no hesitancy in applying the above remedy whenever the diagnosis of depraved journalism was made. It is better not to take any journal that repeatedly publishes unscientific articles concerning wares that are advertised in its pages. Unfortunately also it is almost always safe to look askance on those journals that publish "clinical and therapeutic reports," clippings from other journals, and "reading notices" scattered throughout their reading pages. Clean journals either refuse to publish such matter or else plainly include it in their advertising pages.

The preference should always be given to journals that are owned and entirely controlled by medical men. Even though of necessity they often err, it is at least certain that those conducted by reputable physicians are not promoted for mere mercenary reasons. Journals that are supported by or connected with reputable medical societies are universally governed by only the highest motives, and are well deserving of professional favor. Inasmuch as some of the best scientific work, and nearly all the practical advances in medicine, are first reported to medical societies, it follows that the papers and discussions presented are of the very freshest and most definite interest to the profession, and that the prompt publication of this original matter is of unquestioned service to scientific medicine. Foremost in this class stands by right THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, whose national scope and well-recognized merits need no further mention. Other commendable instances of journals of this class will readily occur to your memory. They are deserving of your constant interest and cordial support. Their ascendancy, along with the few other really independent journals, will mean the extinction of disreputable journalism—a desirable end that can be obtained only through the discriminating favor of an awakened professional conscience—and will insure the occupancy by American medical science of a much higher plane than is possible under present conditions.

Know something about the character and reputation of the editor of the journal for which you subscribe. It is not in reason to expect a clean journal from the hands of a self-advertiser or of a man of doubtful reputation, nor on the other hand is it likely that a physician of good character will edit an immoral journal. Be discriminating in your choice of journals. If you accidentally subscribe for one that on trial proves to be venal and to be opposed to the best interests of the profession, stop it and refuse to receive further copies.

That medical journals are overnumerous and too frequently demoralized and virtueless is in the main the fault of the profession, for if these papers were not received and read they would soon, as they deserve, die of inanition. Therefore it follows that the remedy for the existing disgraceful state of the ethics of medical journalism lies in the hands of the great body of the profession. Just so soon as you refuse to in any way countenance the readily recognized indecent journals, just so soon will they die for want of pabulum, for advertisers will be quick to realize that neither covert nor open advertising will pay in journals thus rejected by an enlightened professional conscience. If you are unable to persuade the promoters of these journals to cease sending you copies, write a letter for publication in one of the better class of journals stating the facts of the case, so that both the disgraced profession and the depleted advertiser may plainly see what journals are in ill repute with the profession and endeavor to exist by doubly deceiving both reader and advertiser.

It is not to be hoped that the reforms urged in this paper may be accomplished in a day, but if, in this imperfect manner, the conscience of the profession is aroused by directing attention to some of the evils that afflict American medicine through the shortsighted cupidity of many of its journals, the writer will feel amply rewarded for his effort.

CONGENITAL APHAKIA AND IRIDEREMIA.*

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Congenital aphakia is an exceeding rare anomaly, and is usually accompanied with other serious defects of the eye. The cases I report are of two brothers, aged 21 and 10, who visited my office Feb. 23, 1899. Advised to see me by Dr. Waterman, of Wilson, Kans., they were brought by an older brother who was perfectly emmetropic, with vision of 20/20 of each eye. This brother stated that there were seven children in the family, three of whom, one sister and these two brothers, had some trouble with their eyes; also that the mother had

*Read before the Midland Ophthalmological Society.

the same affection. An examination showed an involuntary oscillation of the globe—nystagmus of the lateral rotary form—also a gelatinous trembling or vibration of the iris—iridodonesis. The pupils were decentered toward the nasal and inferior quadrant, and would only slightly respond to the mydriatic. There was no history of consanguinity, but one of inheritance from the mother's side. The children having this trouble had brown irides, and those having perfect vision were blue-eyed, although the father had brown and the mother blue eyes. The iridodonesis nearly disappeared when the iris was under the influence of the mydriatic, but reappeared as soon as the pupil was allowed to contract. However, there was a slight trembling at the ciliary margin, seen during mydriasis. The fundus could not be distinctly seen by the direct method, nor did it show very distinctly by the indirect, and by this method the disc appeared convex. It was impossible to get any images by retinoscopy, or by the catoptric test: this I accounted for from the fact that there seemed to be no lens, excepting a small rim of one at the peripheral portion, which was opaque. These opacities seemed to be the residue or remnants of a once existing embryonic lens. They reminded one of a snowdrift nearly melted away. The eyes were all microphthalmic, especially in the lateral diameter. Each boy had one eye smaller, namely the left, and the other was not macrophthalmic. When the pupils were dilated the ciliary processes came distinctly into view. The younger boy had a shaking palsy—lateral—of the head. Each had binocular convergent strabismus and uniocular sursumvergence. The vision of the elder boy was 6/200 and that of the younger 5/200 of each eye.

Iridodonesis is usually accounted for by the loss of the crystalline lens, that is, the posterior support of the iris. In these cases I attributed the trembling of the iris not only to congenital aphakia, but probably to a weakness of the ciliary body and suspensory ligament. The irremediable dimness of vision I considered due to an arrest of development or defect of one or several of the ten layers of the retina. My colleague, Dr. Geo. E. Bellows, also examined the eyes with the ophthalmoscope and corroborated my diagnosis as to the aphakic and probable pathologic conditions of the eyes. For the strabismus I operated on the extrinsic ocular muscles, advancing without tenotomy, conserving all the power of adduction with no loss of abduction, bringing the axes into perfect parallelism, thus not only correcting the strabismus but lessening the iridodonesis to a considerable degree.

The most remarkable thing in these cases is that concave glasses gave improvement of vision showing a high degree of myopia, whereas hypermetropia was expected. I might add that both of these boys, aside from their eye trouble, were of good physical development and of bright intellect, the elder one already a graduate of a normal school and possessing a certificate for teaching.

Since writing this report, the sister of whom I spoke has consulted me with her brother Thomas, who has an iridodonesis with an eccentric pupil to the inferior and nasal quadrant (showing the patients). His eyes are not under the influence of a mydriatic and the iridodonesis is easily seen. He is aphakic, except that there is a remnant of the peripheral lens remaining, and he is also myopic. The iris trembles like a mass of jelly throughout its entire extent, and the trembling is more pronounced at the ciliary margin. In the sister Elva, aged 24, the right eye is disorganized; the cornea is not only opaque, but has retrograded, having a yellowish exudate throughout all of the laminæ; it is flattened antiposteriorly, is a shrunken, old phthisical eye and totally blind, with an increased ocular tension (T.+2). The left eye is also diseased, there being an interstitial vascular keratitis with an increased intraocular tension (T.+3), and only vision sufficient to discern an object when passed between the eye and a bright light. She is scarcely able to see or tell the direction from which the light comes in a dark room. The cornea, however, of her left eye, is not so opaque but that you will be able to illuminate the fundus and get a slight retinal reflex. There is some keratoconus, but there is no iris.

A few weeks ago I reported my first case of irideremia, the only one out of 25,000 patients seen within the last twenty years and now, following close on the heels of this first one, comes the second. It is with some hesitancy that I present my second case, it being such a rare affection and coming so soon after the first one. There is no iris present in this young woman's left eye, and the ciliary bodies here are to be seen. (The eyes were examined by the oblique illumination as well as by the direct and indirect methods, by several of the members present, all corroborating the diagnosis, especially agreeing that there was complete irideremia of the left eye.) May 19, I enucleated the right eye of Miss Elva and, on cutting it open, I found a fluidity of the vitreous humor, of a ceroplastic nature, the cornea hypertrophied and opaque, no iris, but a dense thick fibrous membrane stretching entirely across from the corneoscleral junction in front of the vitreous body. This membrane seemed to be in part an extension of the hyaloid membrane, besides being of a neoplastic nature. The crystalline lens was lodged between this membrane and the cornea, and was perfectly calcified, being as hard as a stone. From the fact that in the two brothers of this family there is aphakia, or absence of the crystalline lens, we need not be too much surprised in finding irideremia or absence of the iris in the sister. It is, however, most remarkable that two patients with this rare anomaly, irideremia, should have presented themselves so closely together.

805 McGee Street.

TREATMENT OF VARIOLA BY BICHLORID BATHS.

BY H. A. INGALLS, M.D.

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During March, April and May last, Dr. R. L. Yeager and myself treated thirty-six cases of variola, of which one was hemorrhagic and thirteen confluent, without mortality, by means of these baths.

Our first case was seen in the papulo-vesicular stage, and we began the baths with the view of lessening the stage of pustulation, thereby securing a minimum of pitting, believing that pustulation was due to the ordinary pus cocci in the pores of the skin, and that in those vesicles that did suppurate the destructive process would be limited to the superficial layer. This case was a confluent one and we were pleased to note that not only was the disease lessened in pustulation and pitting, but that the patient was fairly comfortable, no opium being needed, and there was but little distortion of features at the beginning of the stage of pustulation and but a trace of the peculiar odor of the disease could be detected. That the baths were comforting is evidenced by the fact that the patient asked for them in case of delay. The method of giving the treatment was as

follows: A six-foot bathtub was placed beside the patient's cot and filled with a fairly warm —103-105— solution of bichlorid, 1 to 10,000, and the patient placed therein, head and shoulders above the solution; the nurse then went over the entire body, using a soft cloth, being careful of force applied so as not to cause much pain. After remaining in the bath about ten or twelve minutes, the patient was removed, thoroughly dried, dressed in freshly laundried clothing and placed in a clean bed.

These baths were given night and morning. After removal from the bath the patient expressed much relief, but shortly after, owing to the drying effect, complained of a burning sensation "just beneath the skin." We found that all were likewise affected, so, to obviate this, we began a routine practice of anointing patients immediately after the bath with a mixture of carbolic acid, bismuth subnitrate and olive-oil, with a very happy result.

Our observations lead us to believe this the best treatment yet offered. To substantiate this I give below short reports of Cases 8, 9, 10 and 11 of our series.

CASE 8.—R. M., a male, aged 6 years, never vaccinated, gave a history of exposure. First seen a few hours after the initial chill, his temperature was 104.6, pulse 132, respiration 29. On the morning of the third day eruption could be noticed appearing on the forehead at the edge of the hair. Temperature returned to normal on the evening of the sixth day, and remained so, there being no secondary nor suppurative fever in this case. A few of the vesicles went on to suppuration and a small number of shallow pock marks could be observed when the patient was discharged.

CASE 9.—F. M., a female, aged 30, was never successfully vaccinated. Seen shortly after the initial attack, her temperature was 102.6, pulse 98, respiration 20. On the morning of the fifth day of the disease temperature was normal, remaining so until the seventh day, when pustulation began and temperature went to 100. This was the highest point reached during the suppurative fever. The temperature returned to normal on the tenth day of the disease and remained so. This case was of the confluent type, and there was considerable puffing about the face at the beginning of the stage of pustulation, but not the horrible distortion usually seen in this form of the disease. A few deep pock marks were to be found at the time of discharge.

CASE 10.—P. W., a male, aged 22, was first seen when in the papulo-vesicular stage, with a history of severe onset. The temperature was 101.8, pulse 98, respiration 30. On the fourth day of treatment, about the tenth of the disease, the temperature reached 102.6 and was normal (to continue so) on the eighth day of treatment, about the thirteenth of the disease. This case was also of the confluent type and, with the exception of the pustular stage the features were not much distorted, the patient complained so much that morphia was given. This patient was considerably pitted.

CASE 11.—M. H., a male, aged 20, gave a history of severe onset. Seen in the papular stage, the temperature was 98.8, pulse 72, respiration 24. On the fifth day of treatment, about the ninth of the disease, the temperature reached 100.2, returning to normal (to remain so) on the eighth day of treatment, about the twelfth of the disease. His features were swollen at the beginning of the stage of pustulation, but not repulsively so, as in Case 10. There was but a slight amount of pitting.

Comparing the above cases it will be noticed that the disease is shortened by this treatment. Cases 9 and 10 were of the confluent type, and the one treated from the onset returned to normal four days sooner than the one in whom the treatment was begun after the stage of vesiculation had been reached, and even in this case the disease was aborted three or four days.

Bibb and Osborn have recently reported using these baths with great success, the former reporting several hundred cases in the practice of colleagues, without mortality. I have not had the pleasure of perusing a description of their technique, so am unable to say how it resembles or differs from the above.

Taking the above facts into consideration I think the following deductions can be made in regard to this treatment: 1. There is practically no mortality. 2. The suppurative fever can be shortened four to six days if patient is treated from the onset. 3. A minimum of pitting is secured and an almost entire absence of the characteristic, disagreeable odor. 4. The period of desquamation is materially lessened owing to the thinness of the scab formation. 5. Pain is much reduced; morphia being rarely indicated. 6. The great distortion of features, which gives us such repulsive looking patients, is eliminated to a great extent.

Berkshire Building.

THE SMEGMA BACILLUS.

BY OSCAR A. DAHMS.

CHICAGO.

(Concluded from page 986.)

THE SIGNIFICANCE OF THE SMEGMA BACILLUS IN THE DIAGNOSIS OF TUBERCULOSIS AND SYPHILIS.

Repeated allusions have been made to the striking similarity which exists between the smegma bacillus and the bacillus of syphilis, of tuberculosis, and of lepra. It is obvious that errors in the diagnosis of these diseases, especially of tuberculosis, might lead to serious consequences, and it is further apparent that because of the close resemblance between these microscopic forms, there exists a dangerous possibility of the occurrence of such mistakes whenever a diagnosis is to be based on the detection of the presence of the specific bacillus in physiologic or pathologic fluids and secretions. For these reasons it has been the aim of many experimenters to devise infallible differential stains for these organisms. Considering the comparative unimportance of a differentiation between smegma and lepra bacilli, no further attention will be devoted to that subject here, but the one toward which the careful efforts of numerous observers have for so many years been directed, viz., the successful differentiation between smegma and syphilis bacilli and smegma and tubercle bacilli, requires to be dealt with at some length.

Lustgarten employed the following method to distinguish the syphilis bacillus in sections of syphilitic tissue: 1. Anilin water-gentian-violet solution, twelve to twenty-four hours at ordinary temperature, or two hours at 40 C. 2. Wash in absolute alcohol several minutes. 3. Immerse in an aqueous solution of potassium permanganate—1½ per cent.—ten seconds. A brown flocculent precipitate of manganese hyperoxid forms. 4. Treat with an aqueous solution of sulphurous acid—1 to 2 seconds. 5. Wash thoroughly in distilled water. Nos. 3, 4 and 5 are repeated; at each repetition a shorter time is given to every individual step in the process until the sections are colorless. For cover-glass preparations water is used in place of alcohol after treating with gentian-violet, and the various stages are shortened. The specimens are run through alcohol and oil of cloves, and

finally mounted in Canada balsam. It was observed that smegma bacilli stain readily by this method. For decolorizing the micro-organisms, Edward Welander has recommended the use of oxalic instead of sulphurous acid in this process, for both syphilis and smegma bacilli.

De Giacomi devised a means of staining the syphilis bacillus, which, for cover-glass preparations, consists of the following steps: 1. Stain in hot anilin-water-fuchsin solution for several minutes. 2. Immerse first in a weak, then in a strong, solution of ferric chlorid. 3. Wash in water and pass through the usual reagents for dehydrating and clearing. The syphilis bacilli are stained red. This method, like that of Lustgarten, is applicable to the bacilli of smegma, and does not constitute a differential stain.

In 1887, J. Marcuse, under the guidance of Neisser in Breslau, conducted a series of very careful experiments in the hope of proving or disproving the identity of the syphilis and smegma bacillus, and of ascertaining the effect of each on the animal body, but without success. In spite of the most painstaking efforts he failed to prove that Lustgarten's bacillus is the specific cause of syphilis, and a similar lack of success marked his attempts to cultivate both varieties of organisms. In the same year Doutrelepont and Schütz published a new method of staining the bacillus of syphilis. They employed an aqueous solution of gentian-violet to impart color to their specimens; decolorized them in nitric acid—1.15—then in 60 per cent. alcohol and finally in absolute alcohol. Two years later, Joseph Lewy found that Doutrelepont's method left smegma bacilli unstained, and published the following tabulated differences between the two varieties of micro-organisms:

SYPHILIS BACILLI.	SMEGMA BACILLI.
Found in secretions of syphilitic lesions and in syphilitic tissues of all three stages of the disease.	Found in smegma praeputii penis et clitoridis, between labia majora and minora, in grooves of groin, and about the anus.
Generally lie on the epithelial cells, although they may sometimes occur free. Are rarely present in large numbers.	Lie on or about the epithelial cells, often in large numbers. Also occur abundantly outside the cells, the latter being few.
Are, as a rule, slender, straight or curved rods.	Appear generally as smaller, plumper rods. A greater diversity of form exists.
In staining, resist the action of alcohol for a considerable time.	Are more readily decolorized by alcohol.
Are decolorized by acids in 30 to 40 seconds.	May resist the action of acids for two minutes or longer.
Are decolorized by glacial acetic acid almost instantaneously.	May resist the action of glacial acetic acid for 25 seconds.
Are more numerous the more recent the infiltration.	Are more numerous the longer the secretion has accumulated.
Are stained well by Doutrelepont's method.	Are not stained by Doutrelepont's method.

The diagnostic value of a means of differentiation between smegma and syphilis bacilli is not a considerable one. If it is possible to find bacilli in gummatous lesions of internal organs it may be safely assumed that they are not those of smegma, for it would be difficult to understand how a penetration of smegma bacilli into the interior of syphilitic foci could occur. As regards the presence of bacilli in cutaneous ulcers, a differentiation is often a difficult task, but the diagnosis of syphilis is by no means dependent on a demonstration of the presence of Lustgarten's bacilli in the eruption. Not so with tuberculosis. That the necessity for a means of differentiation between the tubercle and smegma bacillus may become an urgent one is apparent from the fact that a diagnosis of tuberculosis of the urinary tract is often dependent on the discovery of the bacilli in the urine. If the question of the advisability of resorting to operative measures on the urinary organs is to be settled by a demonstration of the presence of tubercle bacilli in, or of their absence from, the urine, it becomes self-evident that every possible source of error must be eliminated. The smegma bacillus has been mistaken for the tubercle bacillus a number of times, and unnecessary surgical operations performed on the strength of microscopic findings. Numerous attempts have been made to discover a useful method of differentiation, but of the many processes that have been recommended and tried, most have been abandoned.

It was known that the bacillus of smegma is more sensitive to acids than the tubercle bacillus, and on this fact were based many of the earlier differential stains, but it remained for Grethe to show, in 1896, the unreliability of these methods and to prove that the difference in sensitiveness to acids between the two bacilli is an exceedingly slight one. At the same time he recommended a new process to distinguish the tubercle from the smegma bacillus, in which acids are entirely dispensed with. This method is based on the property possessed by the smegma bacillus of being attacked by alcohol with greater ease than is the bacillus of tuberculosis, and consequently after the cover-glass preparations have been treated with hot carbol-fuchsin and washed in water, Grethe transfers them to a saturated alcoholic solution of methylene blue. The bacillus of tuberculosis treated according to this method retains the red color, while the smegma bacillus is stained blue. Instead of the saturated alcoholic solution of methylene blue, Czaplewski's alcoholic fluoresceïn-methylene blue may be employed as an after-stain and means of differentiation. That this method was not universally satisfactory is indicated by the fact that within a short time after the appearance of Grethe's publication Bunge and Trantenroth reported occasional failures. These two observers, moreover, pointed out that the peculiarities manifested by the smegma bacillus in the process of decolorization, which were attributed by Gottstein, Matterstock, Bienstock and others to a coating of fat surrounding each organism, could not be due to that cause, for the reason that these peculiar properties manifest themselves even after the bacilli have been treated with chloroform or ether, and because the same properties are not displayed by the numerous other bacteria occurring in smegma. Although failing to state a reason for the belief, they expressed their inclination to look on the fatty acids as the real cause of the peculiar staining qualities of the organism, presuming that these acids are taken up and assimilated by the protoplasm of the bacillus. Czaplewski called attention to the fact that as these peculiarities persist even when the organism is cultivated on media free from fat, it necessarily follows that they are dependent on the peculiar nature of the substance of the bacillus itself.

For differential purposes Bunge and Trantenroth recommended the following procedure: The cover-glass preparations, without having been previously fixed in the flame, are immersed in absolute alcohol or in a mixture of alcohol and ether for a period of time varying from several to twenty-four hours. It is claimed that by this means the organisms lose their resistance to decolorizing agents to such an extent that after having been stained with carbol-fuchsin, and having remained for 1 to 2 minutes in dilute sulphurous acid, an aqueous solution of methylene blue will, in the overwhelming majority of cases, succeed in imparting its color to the bacilli. Tubercle bacilli, after this treatment, still remain intensely red.

Finally, the same observers disclosed another process, which is, according to their statements, absolutely reliable in every case, and consists of these stages: 1.

Place cover-glass preparations, without previous heating, into absolute alcohol for three hours. 2. Treat with a 3 per cent. chromium solution for fifteen minutes. 3. Stain with carbol-fuchsin. 4. Treat with dilute sulphurous acid for two to three minutes. 5. Treat with concentrated alcoholic solution of methylene blue for five minutes. Tubercle bacilli retain the red, smegma bacilli assume the blue color.

In order to test the method of Bunge and Trantenroth the author prepared a series of slides, and applied the process last described. One hundred and seventy-three specimens of tubercle bacilli were stained in this manner. The bacilli were obtained from sputum twenty-two times, and in the remaining 151 cases from pure cultures. The organisms appeared red without exception. Sixty-three cover-glass preparations of smegma bacilli invariably displayed the organisms stained blue. These smegma bacilli were derived from every available source, but the locality of the growth had, in these cases, no influence on the tinctorial qualities of the micro-organisms.

Perhaps the most valuable practical result of the work of Bunge and Trantenroth was the furnishing of the experimental proof that after thoroughly cleansing the orificium externum urethræ, the urine which is withdrawn by means of a clean catheter is constantly free from smegma bacilli.

Laser contends that cultivation of the smegma bacillus is the most reliable method of differentiating it from those bacilli which are morphologically so deceivingly similar to it. He was able to obtain growths of smegma bacilli in twenty-four hours from urinary sediment, while tubercle bacilli required for their development a period of time varying from ten to fourteen days.

Czaplewski found smegma bacilli in sputum, and recently Fraenkel and Pappenheim also reported the occurrence of this organism in expectorations from the lungs. Fraenkel observed the bacillus in the putrid sputum from a case of pulmonary gangrene. If Gabbet's method be employed, he cautions the microscopist to look with suspicion on organisms resembling tubercle bacilli when they occur in sputum rich in myelin and fatty acids. Fraenkel believes Honsell's method to be of utility in differentiating, but he takes care to add that no positive diagnosis can be made without resorting to inoculation of animals. In Honsell's process the bacilli are first stained with carbol-fuchsin, then treated for ten minutes with 3 per cent. hydrochloric acid in absolute alcohol, and finally counterstained with a moderately strong alcoholic solution of methylene blue. Tubercle bacilli are not decolorized.

In Pappenheim's case Gabbet's method revealed numerous red bacilli in the sputum, and a clinical diagnosis of pulmonary tuberculosis was made. In addition to this, the patient was supposed to be afflicted with intestinal tuberculosis. The autopsy disclosed the existence of chronic bronchitis, bronchiectasis, double ascending bronchopneumonia, a small gangrenous pulmonary abscess, and diphtheritic and follicular enteritis of the ileum, colon and rectum. All traces of tuberculosis were absent.

Efforts made by the writer to discover a ready means of differentiation between smegma and tubercle bacilli by staining with osmic acid together with various anilin dyes, before and after treating for diverse lengths of time with chloroform and ether, were not productive of successful results.

Dr. Marion Dorset[2] has called attention to the results obtained in his work with Sudan iii as a selective stain for the tubercle bacillus. Cover-glass preparations fixed in the usual way were immersed for five minutes in a cold 80 per cent. solution of Sudan iii in alcohol. Subsequent thorough washing for five minutes in 70 per cent. alcohol removed the excess of the stain. Dorset found that while this process imparted to the tubercle bacillus a bright red color, it did not stain a variety of other micro-organisms with which he experimented. Among these organisms was the smegma bacillus.

The writer's own experiments with this process have been confined exclusively to tubercle and smegma bacilli. The latter invariably failed to take the stain; tubercle bacilli always appeared red after its application. Methylene blue was used as a counter-stain.

While the total amount of experimental work performed with Dorset's method is perhaps still too small to warrant the assertion that the process is always trustworthy, yet further experimentation will probably prove that such is the case. As far as the reliability of its results is concerned, it is at least the equal of the method of Bunge and Trantenroth, and in the readiness and rapidity with which it can be carried out is far superior to the process devised by the German investigators.

Attention to the following facts may frequently be of service in attempts at differential staining: 1. Smegma bacilli do not occur in internal lesions. 2. Lustgarten's bacilli are not known to have ever occurred in sputum,[3] although if syphilitic lesions exist in the respiratory passages or mouth and these lesions contain Lustgarten's bacilli, it must be admitted that the mixture of the latter with the sputum is not impossible. 3. As first stated by Fraenkel, sputum containing a large proportion of myelin and fatty acids is apt to contain smegma bacilli, but these are not usually numerous. Regarding other varieties of sputum the writer has found: *a*, that the presence of smegma bacilli is exceedingly uncommon; *b*, that the possibility of finding smegma bacilli can be reduced to a minimum by a thorough brushing of the teeth, washing out of the mouth, and gargling of the throat, preferably with a solution containing a small amount of alcohol or sodium bicarbonate, previous to the expectoration of the sputum to be examined. In fact, it may be regarded as doubtful whether smegma bacilli ever occur under these circumstances in sputum which does not possess the characteristics mentioned by Fraenkel. 4. Smegma bacilli do not occur in urine obtained by catheterization after thoroughly cleansing the urethral orifice. 5. In the hundreds of preparations examined by the author, it was never possible to find a single smegma bacillus showing in a typical way the peculiar sharp curve near one extremity which is so frequently observed in tubercle bacilli.

With the increase of our knowledge regarding the peculiarities of growth of the smegma bacillus, the recent valuable improvements in staining methods, and the non-pathogenic character of the organism placed beyond reasonable doubt, it can not but rapidly lose the prominent position it has held in the field of bacteriologic diagnosis.

ADDENDA.

History.—It may be mentioned that Zahn, in 1882, first described the occurrence in sputum of rod-shaped organisms, resembling the bacilli of tuberculosis. He was able to prove the non-identity of these organisms and tubercle bacilli. The existence of similar forms in smegma had not at that time been revealed.

2. A New Stain for the Bacillus Tuberculosis. N. Y. Med. Jour., Feb. 4, 1899.

3. Kamen (Internal Klin. Rundschau, 1889, 1, 10, 13) claims to have found syphilis bacilli in the sputum of a boy 9 years of age, afflicted with hereditary syphilis.

Staining.—A more extensive experience with Dorset's Sudan iii has shown that as far as its inability to give color to smegma bacilli is concerned it has borne out the truth of the statements previously made as to its general reliability as a differential stain. It occasionally happens, however, even when Dorset's directions are faithfully carried out, that tubercle bacilli are but faintly tinted by the dye; so faintly, in fact, that the possibility of overlooking individual bacilli because of the lack of sufficient color can not be entirely excluded.

Significance of Smegma Bacillus in Diagnosis of Tuberculosis.—A. Dietrich has recently described an interesting case in which the symptoms, and the detection of what appeared to be tubercle bacilli led to the clinical diagnosis of peritoneal tuberculosis. The autopsy, performed by v. Baumgarten, disclosed the existence of a purulent ovarian cyst communicating by means of a fistulous tract with the lumen of the rectum. No macroscopic nor microscopic tubercular lesions could be found. The bacilli which had been regarded as those of tuberculosis could still be obtained from the cyst contents, but careful examination showed them to be slightly longer than the average tubercle bacilli, and not constantly characteristically grouped. Injections of these microorganisms into guinea-pigs did not result in the production of tubercular changes. Cultivation experiments were unsuccessful.

It is interesting to note that an early examination of the fluid obtained by exploratory puncture, before any conclusions regarding the diagnosis of the case had been reached, revealed pus microbes, but no bacilli. Some time after purulent intestinal discharges had indicated the occurrence of perforation these rod-shaped organisms began to make their appearance.

The bacilli were probably those of smegma, which, as Dietrich himself suggests, may have gained entrance, *per intestinam,* from the anal region, and finding in the degenerating contents of the cyst a favorable medium for development, multiplied to considerable numbers.

The possibility of the fact that the exploring finger may have been responsible for the introduction of the bacilli into the rectum is mentioned by Dietrich.

BIBLIOGRAPHY.

Despite the somewhat lengthy list of bibliographic references here appended, an extensive literature on the subject of the smegma bacillus does not exist. The majority of the works mentioned do no more than briefly refer to the chief peculiarities of the bacillus.

Abbott, A. C.: The Principles of Bacteriology. 4th ed., Phila., 1897.

Alverez et Tavel: "Recherches sur le bacille de Lustgarten;" Archiv de Physiol. norm. et d'Anat. pathol., No. 7, 1885.

Ball, M V.: Essentials of Bacteriology. 2d ed., Phila., 1894.

Bienstock: "Zur Frage der sog. Syphilisbacillen und Smegmabacillenfärbung;" Fortschr. d. Med., No. 6, 1886.

Birch-Hirschfeld, F. V.: Lehrb. d. Allgem. Pathol. Anat., 3te Aufl., Leipzig, 1886.

Bitter: Virchow's Archiv., Bd. cili, H. 2, p. 209, 1886.

Bunge, R. u. Trantenroth, A.: "Smegma u. Tuberkelbacillen;" Fortschd. d. Med., Nos. 23 u. 24, 1896.

Cornil: Académie de Medicine, 1885.

Crookshank, E. M.: A Text-Book of Bacteriology, 4th ed., Phila., 1897.

Czaplewski: "Nachweis im Sputum;" Centralbl., viii., 1890.

Czaplewski, C.: "Zur Kenntniss der Smegmabacillen," Münchener Med. Woch., No. 43, 1897.

Doutrelepont: "Ueber die Bacillen bei Syphilis;" Vierterjahrschr. f. Dermatol. u. Syph., 1887.

Fordyce, J. A.: Bacillenbefund bei Syphilis: Inaug. Diss., Berlin, 1888.

Fraenkel, C.: Grundriss d. Bakterienkunde, 3te Aufl., Berlin, 1890.

Fraenkel u. Pfeiffer: Atlas d. Bakterienk.. Berlin, 1892.

Fraenkel, A.: "Einige Bemerkungen Ueber d. Vorkommen von Smegmabacillen in Sputum; Berlin Klin. Woch., No. 40, p. 880, 1898.

Friedlander, C.: Mikrosk. Technik. 4te Aufl., Berlin, 1889.

Fülles, H.: Ueber Micro-organismen bei Syphilis; Inaug. Diss., Bonn, 1887.

Gottstein: "Die Beeinflussung des Färbungsverhaltens von Mikro-organismen durch Fette;" Fortschr. d. Med., No. 8, 1886.

Grethe: "Smegma u. Tuberkelbacillen;" Fortschr. d. Med., No. 9, 1896.

Grünbaum, Albert S.: "Note on the smegma bacillus: its diagnostic importance and its cultivation," The Lancet, Jan. 9, 1897.

Grünbaum: "Zur Frage der Zuechtung der Smegmabacillen;" Münch. Med. Woch., xliv., 1897.

Günther, C.: Einfuehrung in das Studium der Bakteriologie; 2te Aufl., Leipzig, 1891.

Heim, Ludwig: Lehrb. d. Bakt. Untersuchung u. Diagnostik, Stuttgart, 1894.

Israel, O.: Practicum d. pathol. Histol., Berlin, 1889.

Jaksch, R. v.: Klin. Diag. inn. Krankh. mittels bakt., chem. u. mikrosk. Untersuchungsmeth., Wien u. Leipzig, 1889.

Kaposi, M.: Pathol. u. Therap. d. Syphilis: Stuttgart, 1891.

Klemperer: "Ueber Syphilis u. Smegmabacillen;" Deutsche Med. Woch., 77, 1885.

Laser, H.: "Ueber Reinkulturen von Smegmabacillen;" Münch. Med. Woch., No. 43, 1897.

Ledoux-Lebard: "Developpement et structure des colonies du bacille tuberculeux;" Arch. de Medicine Experimentale et d'Anat. pathol.; Tome x, No. 3, 1898.

Lehmann, K. B.: Die Methoden d. prakt. Hygiene, Wiesbaden, 1890.

Lesser, E.: Lehrbuch d. Haut u. Geschlechts Krankheiten, Leipzig, 1885.

Lewy, Jos.: "Ueber Syphilis u. Smegmabacillen;" Inaug. Diss., Bonn, 1889; Centralbl. für Bakt. u. Paras., No. 19, 1889.

Marcuse, Jul.: "Die Syphilis u. Smegmabacillen;" Diss., Würzburg, 1888.

Matterstock: Sitzungsb. d. Würzb. phys.-medic. Gesellsch., vom 6ten Juni, 1885.

McFarland, Jos.: A Text-Book on the Pathogenic Bacteria, 2d ed., Phila., 1898.

Miller, J. L.: "The Smegma Bacillus;" THE JOURNAL, June 4, 1898.

Orth. Joh.: Compendium d. path.-anat. Diagnostik, 4te Aufl., Berlin, 1888.

Pappenheim, A.: "Befund von Smegmabacillen im menschlichen Lungenauswurf;" Berlin Klin. Woch., No. 39, p. 809, 1898.

Senn, N.: Surgical Bacteriology, 2d ed., Phila, 1891.

Smirnow: Ueber die Micro-organismen der Syphilis; Dissert., Kasan, 1888.

Sternberg, George M.: A Manual of Bacteriology, New York, 1892.

Tavel: "Zur Geschichte der Smegmabacillen;" Centralbl. für Bakteriol. u. Paras., B. i., No. 23.

Weichselbaum, A.: Grundr. d. pathol. Histol.; Wien u. Leipzig, 1892.

Welander, E.: "Om Färgning af Tuberkelbaciller," Hygiea 1887.

Ziegler, E.: General Pathology; Transl. from 8th German ed., New York, 1897.

Zuelzer, u. Oberlander,: Klin. Handb. d. Harn u. Sexualorgane, Leipzig, 1894.

Zahn: Dissertat, Tübingen, 1882.

Dietrich, A.: "Säurefeste Bacillen in einer vereiterten Ovarialcyste;" Berlin. Klin. Woch., 1899, No. 9.

Honsell: "Ueber Differentia diagnose swischen Tuberkelbacillen u. den Bacillen des Smegmas;" Arbeiten a. d. path. anat. Institut in Tübingen. Bd. ii, p. 317, 1898.

CLINICAL REPORT.

DOUBLE INGUINAL HERNIA UPON THE SAME SIDE: ILLUSTRATION.

BY CHAS. C. ALLISON, M.D.

OMAHA, NEB.

In his excellent monograph on the anatomy and pathology of the rarer forms of hernia, Moynihan[1] very accurately defines the different types of bilocular hernia.

The essential feature of both the properitoneal and the interstitial protrusions is that the loculi have a common neck, osteum abdominale. In the properitoneal the inner loculus lies between the serosa and the fascia transversalis, the outer usually occupying the ring or canal, while in the interstitial the upper loculus may be inter- or extra-parietal, and the lower in the inguinal canal, the loculi having a common outlet to the abdominal cavity.

The presence of two distinct hernial sacs, the one opening into the abdomen at the internal ring, the other having a distinct neck at the external ring, that is to say, the presence of both the direct and the indirect forms in a hernia on the same side is, so far as I am able to learn, a hitherto undescribed hernial anomaly.

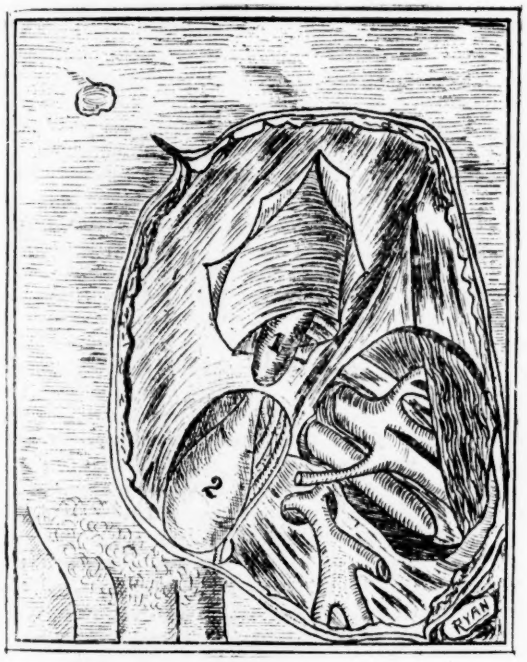
The case which I will describe was a male, 56 years of age, operated on Feb. 3, 1900. The hernial protrusion was oblong in shape and extended into the upper portion of the scrotum. It was reducible and its reduction revealed a very marked attenuation of the abdominal muscles over the inguinal region.

A high incision of the external oblique aponeurosis revealed a sac (Fig. 1) conical in shape and easily separable from the underlying tissues (cord). Its isolation

[1] The Lancet, February 24.

was accomplished, the sac excised and sutured well up within the limits of the internal ring. It was then found that the larger part of the hernial protrusion (Fig. 2) remained in the shape of a direct inguinal hernia which passed into the upper portion of the scrotum. The contents of this sac was omentum and bowel, after the replacement of which the sac was also excised, its neck closed by suture high up within the borders of the external ring, after which a transplantation of the cord was done after the Bassini method, additional support to the external ring being attained by a transplantation of a portion of the rectus muscle after the method described by Bloodgood. No complications were met with during convalescence, and the abdominal wall seemed to offer good resistance to internal pressure.

While it is true that the causes which operate in the production of hernia usually develop a single hernia, although it may be bilocular, there is no reason why two distinct sacs may not develop, yet practically such cases are extremely rare. I have outlined the different types of interstitial hernia for the purpose of making a differentiation more certain in case any abnormal condition is found in the relation of the sacs to the surrounding tissues.



The Bassini operation, with slight modifications to suit the exigencies of the case, has been employed by me for a number of years, but there is one step in particular quite generally followed by the writers on this subject, from which it has been my custom to depart, and that is a high suture of the neck of the sac as opposed to its ligation. The advantages of this surgical apposition of the peritoneal edges over their strangulation by the ligature will be, I think, apparent.

15th and Douglas Streets.

A PARIS omnibus was upset last May and a medical student had his skull fractured. The driver and the company were held responsible and Dr. Laugier testified that the injury to the skull had evidently caused a mental weakness although there was no wound apparent at this date. The court awarded the student $5000, reserving the right to resume the case if his condition became aggravated.

SPECIAL ARTICLE.

RELATIONS OF PHARMACY TO THE MEDICAL PROFESSION.*

II.

Following the preliminary observation on proprietary medicines, in THE JOURNAL of last week (pp. 986-988), the various classes will be taken up and considered in their respective relations to medical and pharmacal practice. They may be divided as follows:

1. "Patent medicines"—medicinal articles of secret composition advertised directly to the laity, the proprietary right consisting in a copyrighted label and in an arbitrary trade-mark or title.

2. "Patent medicines" as above, being also protected by patent.

3. Dietetic preparations, including infants' and invalids' foods, malt and alcoholic liquids, mineral waters, meat products and restoratives.

4. External antiseptics, disinfectants and deodorants, the formulas or general composition known, usually protected by trade-mark or copyrighted names.

5. Proprietary pharmaceuticals—preparations of secret composition protected by trade-mark or copyrighted names, offered for medical prescription.

6. Proprietary pharmaceuticals—preparations under trademark or copyrighted names, of which the general constituents are known, the purported formulas being represented by enumeration of the ingredients, more or less intelligibly, without information as to how a similar preparation could be produced.

7. Pharmaceutical specialties—mixtures, preparations of well-known composition, formulas and full information published. They comprise: *a*, those offered under a descriptive title, protected, if at all, only through the copyrighted label, but not through the name of the preparation itself; *b*, those protected by trade-marked or copyrighted names.

8. Pharmaceutical specialties—simples, preparations of well-known composition, usually made by some special process or from crude material of certain character, the process sometimes being patented. These may be offered: *a*, under descriptive titles without any protection, or *b*, be designated by protected names.

9. Chemicals—substances of definite chemical composition, not mixtures merely, made by patented process and protected by trade-marked or copyrighted names, sometimes the product also being patented.

10. Chemicals and products made by patented processes.

11. Instruments and surgical apparatus protected by patent on mechanical devices.

PATENT MEDICINES.

It should be remembered that the so-called "patent medicines" are not patented for the all-sufficient reason that, in order to comply with the requirements of the patent laws, the composition would have to be divulged, to which the originator or rather "appropriator" would never consent, since it would disclose the fact that there was neither originality nor virtue in the alleged discovery. On the contrary, secrecy of composition is the *vis medicatrix* of all "patent medicines," since this admits of the most mendacious misrepresentation to bolster up their alleged virtues and puff them to a credulous public. The two first generally known medicines of this class, "Ayer's" and "Jayne's Family Medicines," were, however, exceptions, since formulas purporting to give the composition were furnished to medical men when they were first sold, some fifty years ago. Considering that the "pectoral" was alleged to contain morphin, such publicity was rather to be commended; but, on the other hand, the purported presence of iodid of iron in one of the preparations, consisting of an extract of a number of drugs, which would form "ink" with ferrous iodid, suggests that even the pioneer patent medicine men recognized the value of complicated formulas and their potency in preserving for them a monopoly in their offspring.

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* The second of a series of articles to appear weekly in THE JOURNAL designed to correct the abuses from advertising and patronizing pharmaceutical specialties.

The history of some of the most celebrated "patent medicines" even during the past quarter of a century almost rivals the charlatanism of the Middle Ages. Who does not remember "Condurango," backed by the "Bliss Syndicate" and exploited by the leading statesman at Washington, because it "cured" the mother-in-law of Schuyler Colfax of cancer, and the subsequent discovery that the wonderful remedy was a bark without any especial therapeutic effect? "Kaskine" was launched as the most wonderful discovery of the age, a substitute for quinin, without disagreeable taste or after-effects, recommended through a testimonial from one of the celebrated medical teachers of New York—the long-sought desideratum, the realization of the dreams of the world's most famous chemists, rivaling the philosopher's stone. It proved, on analysis by Dr. Hoffmann, to be 20 grams of granulated sugar, selling for one dollar!

Then there was the "Sweet Corassa Compound," or the celebrated "Bible House Prescription," furnished gratis to sufferers by the Rev. Jos. T. Inman of New York. An old postal station in New York was located in an old building known as the "Bible House," and here the reverend Inman, who represented himself to be a retired missionary, received his letters. To the victim would be sent a prescription impossible of compounding, and shortly afterward he would be advised that the mixture could be had on receipt of $3.50, bare cost of the ingredients—about four ounces of gentian and similar vegetable powders. The Halish Sativa Prescription was operated on the same plan, by Noyes, in Rochester, N. Y., celebrated as the home of many similar enterprises, including the "Safe" remedies introduced by Safe-Warner, whose kidneys having been rejuvenated by an infusion of hepatica and saltpeter, felt compelled to force this discovery as a boon on suffering humanity. After exhausting the renal possibilities of the American public, Warner went to London and succeeded in floating a half million dollars in shares on the unsophisticated Britishers only to finally meet with reverses and defeat.

PATENT MEDICINES—PATENTED PROCESS.

Since secret composition is the chief element of the patent medicines, obviously, securing protection through patent of the process with its attendant publicity and limitations would never be thought of. Yet there are exceptions, notably in the case of the most successful of the present-day medicines.

Castoria.—The formula[1] of the preparation of a syrup of senna, with aromatics and alkaline salts together with a process for the extraction of the senna with hot water containing a little sodium bicarbonate, was patented by one Dr. Samuel Pitcher, some thirty years ago, under the name of "Castoria." The name and the label were copyrighted. The patent on the process having expired by limitation some years ago, it was discovered that the name also reverted, along with the process, to public use, and various parties began the manufacture of castoria. The owners of the original patent began legal proceedings against the infringers and succeeded in all but one instance in prohibiting any one from making castoria or vending any article under that name except that made by them. In one instance the case was carried to the United States Supreme Court, which, in an opinion written by Justice Brewer, held that the patent on the process having expired, the name "Castoria," being the only name to designate the article, became a common name and therefore free for use. The design, style and signature of the package being copyrighted can not be imitated, hence the tremendous effort on the part of the original manufacturers to familiarize the public with the signature of a person who manages the business for the present owners—who by the way married into the family. As for Dr. Pitcher, who was the original owner, he was at last accounts struggling along in Hyannis, Mass., apparently content with an occasional crumb from the table of the New York Dives, who has made millions out of his "discovery," and yet the extraction of senna with a weak alkali to furnish with correctives a preparation which will be active but not possess griping qualities, was practiced long before Dr. Pitcher appeared on the stage.

Syrup of Figs.—A preparation quite similar to "Castoria" and rivaling the latter in popularity is "Syrup of Figs." While the name is registered as a trade-mark, it is an open secret that the preparation is a syrup of senna containing some fig juice and aromatics. Although designed for domestic use, this article has been extensively advertised in medical journals and no secret made of the fact that the fanciful name, "Syrup of Figs," was given to the preparation to distinguish it from all other laxatives and also from the fact that it contained a small quantity of the juice, or soluble substance, of figs, together with aromatic carminatives, white sugar and water. In order to satisfy the medical profession and guarantee the excellence of its product, the manufacturer gives the component parts of each teaspoonful as: solution of active principles of senna, 15 minims; aromatic syrup of figs, 3 minims; white sugar, 24 grains; water 18 minims, the above representing 15 grains of senna.

This combination, except for the figs, is substantially that of the official syrup of senna, being of the same strength. There is a discrepancy in the formula, however, which would be of little consequence but for the apparently exact mannner of stating the quantities in a teaspoonful. While the figures of the above quantities added together make 60 grains, without taking the slight specific gravity variation of the liquids into consideration, the syrup resulting from the solution of the sugar will not measure more than 50 minims, instead of 60 minims, or a teaspoonful. Of course, the idea intended to be conveyed by the formula was, that to the liquid extract of senna and aromatic syrup of figs sufficient sugar and water were added to make 60 minims, or one fluid dram. The fact that the 24 grains of sugar when in solution loses nearly one-half its volume seems to have been lost sight of by the chemist who furnished the formula—a trifling error and no doubt unintentional, but this formula is an illustration of how formulas are frequently carelessly thrown together for advertising purposes. This often happens through the ignorance of the advertisers themselves, and often through design, immunity from discovery being relied on through the indifference or unfamiliarity with the subject by the medical readers.

Several years ago an injunction was sought against a manufacturer of so-called non-secret medicines for infringing on the trade-mark, "Syrup of Figs." The case was strongly contested and, when it was proven, and also admitted by the plaintiff, that the article sold under the name of "Syrup of Figs" was really a syrup of senna, the injunction was denied, the court practically deciding that the law could not be invoked to protect any person in the use of a name which was admittedly false, as applied to the character and origin of an article, and that no relief could be afforded "without coming into court with clean hands." From several published formulas, and also practically by the admission of the manufacturers, "Syrup of Figs" owes its value to the use of deresinized senna, which prevents the griping effects attendant on preparations of senna not so treated. The idea is an old one, originating with the late Dr. Hermann Hager, who published a formula for extracting the resin from senna by alcohol. On evaporation of the alcohol the glucosids to which the cathartic action is due are then extracted with water. It has since been observed that the same object is accomplished by extraction of the senna with warm—not hot—water and precipitation of the gummy and other inert matter by the addition of 20 per cent. alcohol; in the clear liquid, on separation of the precipitate, the sugar is dissolved, without heat and aromatics added. This is the official process for syrup of senna, which is 25 per cent. drug-strength, the aromatic being oil of coriander. When made in this manner from Alexandria senna—not "siftings"—there is no better preparation of senna. The syrup of senna should not be made by mixing the fluid extract of senna with syrup simply, since the fluid extract, being made with dilute alcohol, contains the resin to which the objectionable griping qualities of senna are due.

DIETETIC PREPARATIONS.

In this group are included all preparations or products used as refined foods. Since it is sometimes impracticable to differ-

[1] The formula, according to the patent, is as follows: To 135 pounds of senna leaves add 35 gallons of water at 65 C., in which has been dissolved 48 ounces of sodium bicarbonate. Exhaust the senna by percolation until 240 pounds are obtained. In this dissolve 210 pounds of sugar, and four ounces of Rochelle salts, then add spirits of gaultheria, 18 pints, spirits of pepo, spirits chenopodium, spirits of menth. piper., spirits of anise, of each two ounces.

entiate between a food and a medicine in its broad sense, it is somewhat difficult to draw the line sharply between these substances. These products are usually designated by a trademark or copyrighted name. They are rarely protected by process patent. In view of the intermediate position they occupy, the ordinary rules of ethics can not be strictly applied to them and should be largely modified. They are mostly obtained on the recommendation of physicians, often with fair knowledge on the part of the patient as to what they are or what the general composition is.

The name usually indicates the general composition of the article, but not always. If coined names are to be employed, they should indicate the origin or composition of the article rather than be derived from therapeutic uses or effects. A descriptive name in conformity with scientific nomenclature should be associated with the trade-name as a synonym. Preference should be given, by physicians, to such of these articles as conform to these reasonable requirements.

There is one general requirement which should be strictly adhered to, viz., when any article of this character is exploited to the laity as a remedy or cure for any complaint or ailment, medical patronage should be at once withdrawn. Instances are numerous where, for example, a lithia water has met with great favor of medical men, who have been unstinted in their testimonials and thus given the water standing and reputation. No sooner was this established than the owners began to exploit the water to the laity in public prints, often with the most hideous "before and after taking" illustrations. Many of the so-called malt extracts (alcoholic) have a similar history. The first domestic brand of malt extract was designated as a "Tonic" and, after its enterprising proprietor had spent a large fortune in introducing it to the medical profession and the drug trade, he was surprised that it was not better appreciated, not realizing that an up-to-date physician could not afford to prescribe his tonic, no matter "how famous the town" in which it was made. The result was that the article degenerated into a common beverage and, as such, found its level in the buffet. The rule then should be, emphatically; these articles may be patronized, provided their composition is known and they are not exploited as therapeutic agents.

Therapeutics.

In Gouty Subjects.

℞. Extracti colchici radicis.....gr. iv
Ft. pil. No. xii. Sig. One or two three times daily. Spirits of camphor locally. —*Brocq.*

During the formative period, give tar water to drink, and:

℞. Sulphuris sublim.....gr. iss
Pulv. camphoræ.....gr. i
M. For one capsule. Sig. Three such to be taken daily. —*Robin.*

℞. Sodii sulphatis
Sodii bicarbonatis
Potassii sulphatis
Acidi tartarici
Mucilag acaciæ āā.....3iiss 10
M. Sig. From ten grains to a dram daily in divided doses, in a wineglassful of water or milk.

℞. Sodii arsenitis.....gr. i
Syrupi simplicis.....℥i
Aquæ q. s. ad.....℥iv
M. Sig. Teaspoonful in water twice a day.

FOR COMPRESS.

℞. Chloroformi.....3viiss 30
Essence caryophyl.....31¼-iiss 5-10
Beechwood creosote.....gr. xv-xxx 1- 2
Camphorated oil.....3xiiss 50
—*Gourine.*

Apply carbolic acid to the central point.

℞. Ichthyol.....3i
Emplast. plumbi.....3ii
Emplast. resinæ.....3i
M. Sig. As a plaster. —*Stelwagon.*

℞. Acidi salicylici.....3iiss
Emplast. saponis.....℥iss
Emplast. diachyli.....℥i
M. Sig. Spread and apply.

Insomnia.

The following methods of treatment of this condition are quoted from "The Practitioners' Manual."

WHEN PAIN IS NOT AN ELEMENT.

℞. Chloral.....gr. xx
Ammonii bromidi.....gr. xx
Extracti nucis vom. fluidi.....gtt. x
Ext. belladonnæ fluidi.....gtt. ii
M. Sig. To be taken at once and repeated in an hour or two if needed. —*Adolphus.*

IN NERVOUS INSOMNIA.

℞. Croton chloral
Tinct. zingiberis āā.....3iiss 10
Aquæ menthæ pip.....3xxxviiss 150
M. Sig. A dessertspoonful at night. —*Boas.*

FROM OVEREXCITEMENT, WITH MOTOR RESTLESSNESS.

℞. Sulfonal
Ext. conii fluidi āā.....3i
M. et. disp. in caps. No. xv. Sig. One capsule at 6, 8, and 10 p. m.

FOLLOWING ALCOHOLIC EXCESS.

℞. Chloral
Potass. bromidi āā.....℥iv
Extr. cannabis indicæ
Ext. hyoscyami āā.....gr. xvi
Chloroformi.....3ii
Aquæ bullientis q. s. ad.....Oii
M. Dissolve the extract of cannabis indica in the chloroform and add the chloral. Pour the boiling water on this and add the bromid and the hyoscyamus. When cold, filter. Dose: Dessertspoonful to a tablespoonful. —*E. C. Hooved.*

℞. Amylene hydrate P. G.....gr. xc
Morphinæ hydrochloratis.....gr. ¼
Extract of licorice.....3iiss
Aquæ dest.....3xxv
M. Sig. Half on retiring.

℞. Amylene hydrate.....gr. lx
Morphinæ hydrochloratis.....gr. ¼
Mucilag. acaciæ.....3vi
Aquæ.....3xiiss
M. Sig. As an enema. —*Fischer.*

℞. Paraldehyde.....3ii
Glycerin.....℥ss
Syrupi.....℥i
Spt. etheris nitrosi.....3x
Olei anisi.....gtt. xx
M. Sig. Tablespoonful every half hour until sleep, or until six have been taken. —*A. A. Rawson.*

℞. Chloral.....gr. x
Sulphonal.....gr. x
Phenacetin.....gr. v
M. Sig. For one dose. —*Edwin Rayner.*

In the eruptive fevers in childhood, tuberculous meningitis, pernicious malaria with cerebral excitement trional, gr. vi-xv, in the twenty-four hours. Children show a particular tolerance and it is prompt in action. —*H. D. Chapin.*

In neurasthenia, strychnin and digitalis are often effective. —*C. K. Clarke.*

In overworked students, strychnin or hot coffee. Magnesium sulphate is an ancient but trusty ally. As a last resort, chloralamid, but without the patient knowing what drug he is taking. —*Donald MacAlister.*

In the insane, chloral is the surest sleep-producer. Paraldehyde at times acts well. Secure sufficient outdoor exercise and supply suitable diet. —*J. Y. A. Campbell.*

If the patient be gouty, sodium phosphate, sodium salicylate piperazin, or uricedin. In kidney diseases with contracted blood-vessels, nitrites. In anemia, iron in organic preparation. —*R. W. Wilcox.*

To break a pernicious habit of sleeplessness, trional in initial dose of gr. xx-xxiv, subsequently reduced to gr. xv.

—*J. A. Browne.*

Treatment of Rachitis.

℞. Phosphori ..... gr. 3/20 |01
Olei amygd. dulc..... ʒviiss 30|
Pulv. sacch. alb.
Pulv. acaciæ, āā..... ʒiii+gr. xlv 15|
Aquæ dest..... ʒx 40|
M. Sig. Teaspoonful at a dose.

℞. Phosphori ..... gr. 1/25
Olei olivæ (refined)..... ʒi
Sacch. alb.
Pulv. acaciac, āā..... ʒss
Aquæ dest., q. s. ad..... ʒii
M. ft. emuls. Sig. Dose one teaspoonful.—*Mettenheimer.*

℞. Phosphori ..... gr. 15/100
Ol. morrhuæ ..... ʒiii
Saccharin ..... gr. lxxv
Ess. limonis..... gtt. ii
M. Sig. A small teaspoonful may be taken daily.—*Marfan.*

Iodo-phosphorated butter to be used as a substitute for cod liver oil in hot weather:

℞. Fresh butter..... ʒxviiss
Potassii iodidi..... gr. iv
Potassii bromidi ..... gr. xv
Sodii chloridi..... ʒii
Phorphori ..... gr. 1/7
M. Sig. About one-third of an ounce daily spread on bread.

—*Trosseau* (modified by Comby).

℞. Syr. calc. lactophosphat..... ʒxxv 100|
Ferri citro-ammon. pyrophosphat... gr. xv 1|
Aquæ dest., q. s. ut sol.
M. Sig. A dessertspoonful one to three times daily.

—*D'Espine and Picot.*

℞. Aquæ calcis
Syr. Calc. lactophosphat, āā... .....1 part
Olei morrhuæ.....2 parts

—*J. Lewis Smith.*

℞. Phosphori ..... gr. 3/20 |01
Olei morrhuæ..... ʒxxv 100|
M. Sig. Teaspoonful twice daily.

℞. Phosphori ..... gr. 3/20 |01
Dissolve in
Olei amygd. dulc..... ʒiiss 10|
Add
Pulv. acaciæ
Syr. simplicis, āā..... ʒi¼ 5|
Aquæ dest..... ʒiiss 80|
M. Sig. One teaspoonful daily, below the age of 1 year; from the twelfth to the fifteenth month, two; and over 2 years of age, four teaspoonfuls. Each teaspoonful contains half a milligram of phosphorus.—*Kassowitz.*

℞. Syr. ferri iodidi..... gtt. iii-xxiv
Aquæ dest., q. s. ad..... ʒiii
M. Sig. One teaspoonful every four or five hours.—*Hare.*

℞. Phosphori ..... gr. i
Alcoholis absoluti..... ʒv
Glycerini ..... ʒiss
Alcoholis ..... ʒii
Spt. menthæ pip..... m. xl

Dissolve the phosphorus in the absolute alcohol with the aid of a gentle heat; then add to it the glycerin, alcohol, and spirit of peppermint, previously mixed and slightly warmed. Each fluid dram contains nearly 1-20 gr. of phosphorus.

—*J. Ashburton Thompson.*

Puerperal Eclampsia.

Dr. G. Ernest Herman, in "Allbutt's System of Medicine," says:

I believe that much of the mortality of puerperal eclampsia comes from the pernicious maxim, "Deliver as quickly as possible." Eclampsia depends upon a disease of the kidney peculiar to pregnancy; and for its prevention I think that labor should be induced as soon as any considerable amount of albumin is found in the urine, and other treatment has not been effective. But when the acute disease—characterized by fits and urine solid with albumin—is established, the time for prevention has passed. The disease will run its course, and this course is not affected by delivery. Some cases end in recovery without delivery; others get worse after delivery. There is abundant evidence that delivery has no favorable effect on the disease. I speak of natural delivery. Forced delivery has many bad effects. Manipulations provoke fits. Dragging the child through an imperfectly dilated genital passage involves tearing of the parts. Pulling the child away when the uterus is not contracted surely leads to post-partum hemorrhage. Cesarean section has been proposed; and the hastening of delivery by freely cutting open the cervix, vagina, and vulva (Dürhssen). Such measures have no justification unless immediate delivery greatly benefits the patient, and it does not. The right course is to let the labor go on with the least possible interference. Let the uterus do its work, and interfere only if some condition be present which makes natural delivery impossible.

Regarding the means of treatment to different stages of the disease, he says:

1. The patient has had a fit; she is restless and half conscious. The aim of treatment is to prevent further fits by lessening the irritability of the nervous system. We have three agents for this purpose—chloroform, morphia, and chloral. The first two are more powerful than the third, and chloroform is the quickest, but its prolonged use is sometimes impracticable, and not free from risk. I therefore prefer morphia. Give half a grain of morphia subcutaneously. Wait to see its effect, and if in half an hour the patient be not asleep, give a quarter of a grain more, or if the patient be still very restless, half a grain. If restlessness be great so that another fit seems imminent, give chloroform at once, and keep the patient under it until the morphia has had time to produce narcotism. Put the patient on her left side, in the semi-prone position, with her left hand behind her back.

2. The patient is in coma. The coma may be simply that which follows fits. If so, it will soon be broken by the restlessness which precedes fits, and then treatment by morphia will be appropriate. It may be accompanied by re-establishment of the urinary secretion, and then it will pass into natural sleep, and recovery will follow; and, if so, no treatment is needed. It may be deepening into coma which ends in death. For such coma baths are the only remedy. If the temperature is normal or subnormal, use the hot bath, followed by packing in hot blankets. If temperature is rising, the cold bath is the only way of reducing temperature, and the only hope of saving life. Watch the progress of labor, and interfere only if conditions arise which would demand interference in a patient not the subject of eclampsia.

Transpellicular Treatment.

By this term Unna describes, in his *Mon. f. Prakt. Derm.*, March 15, the application of green soap or of any strong remedy on top of a dried application of collodion. The effect of the drug is felt through the pellicle formed by the collodion, with its irritating properties abolished. The compression of the collodion film is peculiarly beneficial in cutaneous affections accompanied by a circumscribed angioneurotic edema—strophulus, insect bites, itching chilblains and lupus erythematosus—and the results of this combined transpellicular treatment are remarkably favorable.

An Alkaline Oxidating Substance for Dermatology.

Such a substance has long been sought, and Unna announces its discovery in a salve-soap made of three parts paraffinum liq. and seven parts sapo medicatus, with which natrium dioxid is incorporated—natronsuperoxyd. He states that he has never seen anything to compare with it in the rapidity with which it cures acne punctata and pustulosa, and rosacea seborrhoica, restoring the skin completely to normal. It is applied to make a lather three times a day, until it produces discomfort and is then rinsed off.

Salicylates in Gonorrheal Epididymitis.

Bettmann asserts that the pains are promptly relieved and the application of a compressing bandage made possible in three to four days, if 6 to 8 c.c. of a mixture of one part methyl salicylate to two parts olive oil is applied on cotton to the scrotum. It is then hermetically wrapped in rubber tissue, and fastened in a padded suspensory. The application is renewed every twelve hours.

Acute Coryza in Nurslings.

Dr. F. Figueira recommends, in *O Brazil Médico* of March 1, a mixture of ten parts almond oil to one part menthol, for external use. Instil one or two drops in each nostril three to four times a day. Keep constantly boiling in the room a mixture of 200 gm. water and 5 gm. essence of turpentin.

Medicolegal.

Nonexperts Can Give Opinion on Intoxication.—The testimony of an expert, the appellate term of the Supreme Court of New York holds, in Donoho vs. Metropolitan Street Railway Company, is not required to give an opinion on the question of intoxication, but the evidence of a nonexpert witness in characterizing the action of a person as that of an intoxicated person is admissible.

Medical Examiner's Report is Conclusive.—By an Iowa statute a life insurance company is debarred from setting up in defense of an action on a policy that the assured was not in the condition of health required by the policy at the time of the issuance or delivery thereof, unless the same was procured by the fraud or deceit of the assured. A medical examiner for a company pronounced a certain person "a fit subject for insurance." And when an insured is in such a physical condition as to be "a fit subject for insurance," the Supreme Court of Iowa holds, he is in a "condition of health required by the policy." Wherefore, it maintains, in Stewart vs. Equitable Mutual Life Association of Waterloo, that, in the absence of fraud or deceit practiced on the medical examiner of the insurer, the company was estopped from questioning the truthfulness of the assured's answers, and it holds that, unless the examiner was deceived by these answers, or in some other way, the company was not entitled to have the assured's condition of health investigated. Besides, it holds that, while, ordinarily, the intention of the insured is not involved where answers are warranted to be true, yet where their truthfulness depends on the construction of a question subject to two different interpretations, then his intention becomes important for his understanding of the inquiry determines the character of the answer, and the material inquiry is whether he truthfully responded to the inquiry as he understood it. Questions prepared by the insurer are to be construed liberally in favor of the policy holder. For example, the question, "How long since you have consulted a physician?" might by different persons be taken to be an inquiry as to how long since a physician was last, or first, consulted, perhaps depending on whether it was the person's habit to consult one or not, so it is held that an answer of "five years," referring to the beginning of the time of such consultation, could not be said to be false, though the ailment then was a "cold," and later diabetes, perhaps.

Transferred Note For Services Enforceable.—A physician practicing in San Augustine, Texas, and vicinity, was given a negotiable promissory note, which he transferred before maturity for value, and without notice as to what its consideration was. The note was given in reference to medical services, which were in fact never performed. Besides the physician had not complied with the requirements of the Texas statutes relating to physicians in order to entitle him to practice, and was not among the classes of persons exempted from the statute. Nor did it appear whether he had a diploma or not, in the action on the note, brought by the party to whom it was transferred. Now, under these circumstances, the physician would have been incapacitated from recovery for medical services, unless he held a diploma, says the Court of Civil Appeals of Texas. But, assuming that he held no diploma, it holds, Roach vs. Davis, that the rule forbidding his recovery would have no application to a negotiable note for services, in the hands of an innocent holder. And so here it affirms a judgment in favor of the holder of the note in question.

Physician Not Required to Attend Trial.—One of the grounds urged, on the appeal of the St. Louis & San Francisco Railroad Company vs. Kilpatrick, why a judgment for damages for personal injuries necessitating the amputation of the latter's foot should be reversed, was an alleged abuse of discretion in the trial judge refusing an attachment for a doctor who was wanted as a witness in the case. But the Supreme Court of Arkansas holds that there was no error in refusing the attachment because the company could not enforce the doctor's attendance, there being no showing that he had been summoned, and had failed to appear and give his deposition. Under the Arkansas statute, the court says, the deposition of a practicing physician may be used, instead of his testimony *ore tenus*, and such witness shall not be compelled to attend unless he has failed, when duly summoned, to appear and give his deposition. Moreover, it seems to think that some account ought also to be taken of the fact that it appeared that the testimony the doctor was expected to give was cumulative, and no prejudice could have resulted from his failure to testify.

Privileged and Private Communications.—The Iowa Code provides that no practicing physician shall be allowed, in giving testimony, to disclose any confidential communication properly entrusted to him in his professional capacity, and necessary and proper to enable him to discharge the functions of his office according to the usual course of practice. In Nelson vs. the Netherland Life Insurance Company, a physician was permitted to testify that he was consulted in his professional capacity by the assured on seven different dates, and that he prescribed for him during that time. In this, the Supreme Court of Iowa sees no infraction of the law. It points out that the evidence had reference to their relation solely, and not to any communications because of it, and that the fact that the witness attended the assured as a physician, and prescribed, involved no disclosure of any information obtained professionally. It further holds that the witness undoubtedly had the right to refresh his memory as to dates from the prescriptions. But whether they were admissible independent of his testimony it does not determine. But it regards it as a clear attempt to evade the statute to ask the witness whether he advised the assured as early as a certain date that he was suffering from a disease for which he was treating him, and also whether, at the time of the last treatment he suffered from any disease other than that for which he treated him at the date first referred to. It says that whatever the advice given, information on which it was based was derived from the assured; so, too, the doctor could only ascertain that the patient suffered from no other disease in the same way. Then, the prescriptions were, rightfully or wrongfully, introduced in evidence, and their ingredients explained. But the court does not believe the statute will permit such a disclosure, though indirectly made, as that which would be embodied in the fixing of the fact that the assured was suffering from one disease only for four months prior to his death and showing the treatment administered, from which the nature of the malady would be made known to those skilled in medicine. On the other hand, the court says that the statute does not prescribe any rule of professional conduct. The physician, in disclosing the secrets of his patient in conversation or writing, violates no law of which the court has knowledge, though such a course may be reprehensible, and in disregard of professional propriety. It is "in giving testimony" in a judicial proceeding that such disclosures are prohibited by statute, and doubtless this may no more be done by affidavit than orally. And here the court makes another distinction. As a part of her proofs of loss, the beneficiary presented to the company an affidavit by the physician who was the witness above mentioned. That affidavit disclosed facts indicating the invalidity of the policy. The company offered the affidavit in evidence. It was objected to as a disclosure of a confidential communication by the assured to his physician. The court says that the policy required no more than satisfactory proofs of death, and the company might, under this provision, demand that the fact of death be shown with reasonable definiteness and certainty. But, under the guise of ascertaining that fact, it had no right to insist upon information concerning the cause thereof, and that would have no direct bearing on such an inquiry. So the unnecessary statements made by the physician in his affidavit must be regarded as gratuitous. Nevertheless, and notwithstanding that the affidavit would have been incompetent as evidence of the physician, or of what he said, the court holds that, having been forwarded by the beneficiary for the consideration of the company in determining its liability, it should be received in evidence as in the nature of an admission and accorded the consideration due to it in view of all the particular circumstances of the case.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

Boston Medical and Surgical Journal, April 12.

1.—*Folie À Deux. Arthur C. Jelly.
2.—*Use of the Angiotribe. J. Riddle Goffe.
3.— Problem of Boston's Insane. Philip Coombs Knapp.
4.— Work of Trustees of the Boston Insane Hospital, and Their Plans for its Future Development. Henry C. Baldwin.

Medical Record (N. Y.), April 14.

5.—*Diffuse Septic Peritonitis, with Special Reference to a New Method of Treatment, Namely, the Elevated Head and Trunk Posture, to Facilitate Drainage into the Pelvis, with Report of Nine Consecutive Cases of Recovery. George R. Fowler.
6.—*Observations and Suggestions Concerning Hypodermoclysis. Robert C. Kemp.
7.—*Nitrous Oxid and Ether Anesthesia. H. W. Carter.
8.—*Chronic Vertebral Rheumatism (Rheumatic Spondylitis) and its Pseudo-Neuralgic Form. H. Forestier.
9.—*Treatment of Superficial Wounds without Sutures. John F. W. Whitbeck.
10.— Case of Iodoform Poisoning in Infant Two Weeks Old. J. C. Josephson.
11.— Complication of Miscarriage with Appendicitis, due to Traumatism. Carl D. S. Früh.

Medical News (N. Y.), April 14.

12.— Two Cases of Recurrent Tubal Pregnancy. Philander A. Harris.
13.— Recent Advances in Treatment of Insomnia. Reynold W. Wilcox.
14.— Purulent Meningitis; Report of Six Cases. L. Napoleon Boston.
15.—*Legislation Needed in Regard to Apparent Death. Henry J. Garrigues.
16.—*Ligation of First Portion of Right Subclavian for Aneurysm of Third Portion. A. E. Halstead.

Philadelphia Medical Journal, April 14.

17.— Selections from the Lane Lectures: Senile Arterial Plethora. T. Clifford Allbutt.
18.—*Case of Death from Psychic Insult, with Remarks on Delirium Nervosum Dupuytren and Operation-Psychoses. F. Pagenstecher.
19.—*Control of Hemorrhage in Penetrating Wounds of Chest. Robert G. LeConte.
20.—*Case of Malarial Fever. Some Stains for Sporozoa of Malaria. Albert Woldert.
21.—*Peculiar Manifestations of Uremia. Frederick Krauss.
22.— Report of Case of Abdominal Pregnancy. Charles D. Center.

New York Medical Journal, April 14.

23.—*Primary Diffuse Small-celled Sarcoma of Parietal Pericardium. J. C. Williams and A. L. Miller.
24.—*Remarks on Perineorrhaphy, Chiefly in Reference to Mechanics of Deep Sutures. J. Milton Mabbott.
25.—*Gunshot Wounds. Report of Gunshot Cases in Spanish-American War and Deductions Therefrom. (*Concluded.*) W. C. Borden.
26.— Consideration of Neuromuscular Elements in Hip-Joint Disease, with Especial Reference to Questions of Abolition of Protective Treatment. Newton M. Shaffer.
27.—*Books are Injurious to the Eyes. F. G. Murphy.
28.—*Ankylostomiasis in Porto Rico. Bailey K. Ashford.
29.—*Experiments in Transfusion of Complete Blood. A. Davis Hard.

Cincinnati Lancet-Clinic, April 14.

30.— Penetrating Wounds of Eyeball. Francis Dowling.
31.— Hemorrhoids. George J. Monroe.

Medical Review (St. Louis, Mo.), April 14.

32.— Some Remarks on Dementia Paralytica, with Presentation of Patients. E. C. Runge.
33.— Eleven Cases of Castration and Their Histories. Merrill Ricketts.

Medical Age (Detroit, Mich.), March 25.

34.—*Significance of Postclimacteric Hemorrhages. F. A. L. Lockhart.
35.— Catarrhal Deafness. A. L. Adams.
36.— Use of Nauheim Bath in Cardiac Disease. F. R. Henry.
37.— Peritonitis, with Perforation of Small Intestine; Gunshot Wound of Abdomen with Thirteen Perforations. T. J. Crofford.

American Practitioner and News (Louisville, Ky.), February 15.

38.—*Thyroid Extract in Psoriasis. John E. Hays.
39.— Report of Case of Epidemic Cerebrospinal Meningitis Treated with Antistreptococcus Serum. J. D. Maddox.

Pediatrics (N. Y.), March 15.

40.— Hygiene of Children's Sleeping Apartments. Joseph Byrne.
41.— Cretinism, with Report of Case of Sporadic Variety. Christopher Graham.
42.— Five Years' Experience in Private Practice with Diphtheritic Antitoxin Serum. Frank W. Wright.
43.— Fatal Case of Carbolic Acid Poisoning in Infant, Due to Absorption by Skin. R. Abrahams.

Railway Surgeon (Chicago), April 3.

44.— Traumatic Neuritis or Traumatic Tetanus? S. R. Hewitt.
45.— Case of Fracture of Cervical Vertebræ. S. A. Spilman.

American Journal of the Medical Sciences (Philadelphia), April.

46.—*Contribution to Diagnosis of Diverticula in Lower Part of Esophagus. Franz A. R. Jung.
47.— Clinical Aspects of Plague. Frank G. Clemow.
48.— Remarkable Case of Probable Thoracic Aneurysm Presenting Intermittently Through the Sternum. Richard C. Cabot.
49.—*Experiment in Transmission of Syphilis to Calves. Mazyck P. Ravenel.
50.— Gumma of Iris and Ciliary Body. Recovery with Normal Vision. Charles A. Oliver.
51.—*Value of Electrolytic Dilatation of Eustachian Tubes in Chronci Tubal Catarrh and Chronic Catarrhal Otitis Media. Arthur B. Duel.
52.— Localization, Diagnosis, Prognosis and Treatment of Gonorrhea in Women. (*Continued.*) John G. Clark.

Yale Medical Journal (New Haven, Conn.), April.

53.— Chronic Endocarditis or Valvular Disease. O. T. Osborne.
54.— Garbage; What is Garbage, and How Can it Best be Disposed of? C. W. S. Frost.

Annals of Surgery (Philadelphia), April.

55.—*Surgery in Presence of Sugar in Urine. Arthur L. Fisk.
56.— Volvulus in Association with Hernia. R. Lawford Knaggs.
57.—*Traumatism Inflicted by Animals. R. Harvey Reed.
58.—*Use of Fixation Plates in Treatment of Fractures of Leg. Lewis W. Steinbach.
59.—*Relationship Between Cholecystitis, Jaundice and Gall-Stones. Archibald MacLaren.
60.—*Principals Involved in Immediate Hermetic Sealing of Aseptic Wounds. Henry O. Marcy.
61.—*Surgery of Gastric Ulcers. Thomas W. Huntington.
62.— Excision of External Two-Thirds of Gasserian Ganglion, by Hartley-Krause Method, After Preliminary Ligation of External Carotid Artery. Joseph M. Spellissy.
63.— Two Cases of Anomalous Spinous Process of Seventh Cervical Vertebra Articulating with Scapula. H. Augustus Wilson and J. Torrence Rugh.
64.— New Operating Table and Improved Bowl Stand. August Schachner.
65.— Conical Stump after Amputation in Childhood. Charles A. Powers.

Clinical Review (Chicago), April.

66.— What the Physician in General Practice Ought to Know about Insanity. E. A. Christian.
67.— Report of Some Surgical Work at Cottage Hospital, Harvard, Ill. C. M. Johnson.
68.— Mutilating Operations in Obstetric Practice. Denslow Lewis.
69.— Complicated Cataract Extractions: Enucleation for Panophthalmitis. J. Elliott Colburn.
70.— Etiology, Pathology, Diagnosis and Treatment of Tumors. A. H. Levings.
71.— Cerebral Hemorrhage. D. R. Brower.

Journal of Nervous and Mental Diseases (N.Y.), April.

72.—*Landry's Paralysis; Remarks on Classification. E. W. Taylor and J. E. Clark.
73.—*Case of Unilateral Progressive Ascending Paralysis, Probably Representing New Form of Degenerative Disease. Charles K. Mills.
74.— Case Presenting Right-Sided Hemiplegia with Hemianesthesia, Right Homonymous Hemianopsia, Jargon Aphasia, Wernicke's Pupillary Reaction Sign and Neuritic Pain in Arm of Paralyzed Side. F. X. Dercum.
75.— Case of Acute Poliomyelitis Anterior, in Man 17 Years of Age. Wharton Sinkler.
76.— Transient Real Blindness in Hysteria. George C. Harlan.

Medicine (Detroit, Mich.), April.

77.—*Inguinal Hernia: Comparative Results of Radical Treatment by Operation and Treatment by Injection; Report of Cases. Thos. P. Scully.
78.—*Enzymes and Immunity. Chas. T. McClintock.
79.—*Observations on Recent Pathology of Acute Lobar Pneumonia as Basis for Treatment. James K. Crook.
80.—*Carcinoma in Cattle. Leo Loeb and George Jobson.

The Doctors' Magazine (Chicago), March.

81.— Surgical Clinic at College of Physicians and Surgeons. J. B. Murphy.
82.— Clinic on Syringomyelia, Neurasthenia, and Facial Paralysis. D. R. Brower.
83.— Medical Instruction in Syria. Franklin C. Weils.

Journal of Eye, Ear and Throat Diseases (Baltimore, Md.), March-April.

84.— Case of Empyema of Frontal Sinus. F. T. Rogers.
85.— Successful Application of Adrenal Extract in Rhinology. Wadsworth Warren.

Archives of Pediatrics (N. Y.), April.

86.—*Hypertrophic Pyloric Stenosis in Infancy. Eric Pritchard.
87.—*Note on Kernig's Sign in Infants. Frederick A. Packard.
88.—*Case of Congenital Goiter and Diaphragmatic Hernia. Isaac A. Abt.
89.—*Treatment of Whooping-Cough Without Drugs. N. R. Norton.
90.—*Drug Values as Observed in Management of 752 Cases of Whooping-Cough. Charles G. Kerley.

New Orleans Medical and Surgical Journal, April.

91.— Is Food Inspection Beneficial to Health? Charles Heitzman.
92.— Regulations for Lay Nurses, to Prevent Spread of Contagious Diseases and to Prevent Quarantines; Yellow Fever, Cholera, Plague, Smallpox, Diphtheria, Typhoid Fever, Scarlet Fever, Measles. Edmond Souchon.
93.— Typical Case for Use of Digitalis. Arthur V. Meigs.
94.— Case of Jacksonian Epilepsy Specific in Type. Traumatic Hernia. Carcinoma of Breast. W. W. Keen.
95.— Interesting Case of Enteric Fever, with Remarks on Diagnosis and Treatment of Peritonitis. Addison's Disease. James C. Wilson.
96.— 1. Treatment of Simple Case of Nausea and Vomiting in Pregnancy. 2. Care of Breasts after Miscarriage. E. P. Davis.
97.— 1. Treatment of Improperly Fed Child. 2. Bronchopneumonia. E. E. Graham

St. Paul Medical Journal, April.

98.— Bacteriologic Diagnosis of Diphtheria in Minnesota. F. F. Westbrook.
99.—*Subnormal Temperature. Record of Three Cases with Comment on its Probable Cause. H. A. Tomlinson.
100.— Tropical Diseases. H. P. Ritchie.
101.— Value of Kindergarten as an Adjunct to our Public School System. Ogden H. Hammond.

Buffalo Medical Journal, April.

102.— Practical Psychology. Frederick Peterson.
103.—Rational Steps in Scientific Treatment of Nervous Prostration, Headache and Neuralgia. Ambrose L. Ranney.
104.— Uterine Hemorrhage. A. L. Beahan.
105.— Two Cases of Myelitis, One Subacute; Recovery; the Other Central; Death. Edward B. Angell.
106.— Radical Operation as Applied to Middle Ear Diseases. George F. Cott.

Pacific Medical Journal (San Francisco), April.

107.—*Gynecologic Treatment of Insane in Private Practice. Ernest Hall.
108.—*Modern Pathology in Diseases of Digestion. H. D'Arcy Power.
109.— Early Diagnosis of Bright's Disease by Increased Arterial Tension by Gaertner's Tonometer. Alfred W. Perry.
110.— Surgery of Vermiform Appendix. Winslow Anderson.
111.— Case of Nature's Surgery. Ernest S. Pillsbury.
112.— School Hygiene. Frank Howard Payne.

American Medical Compend (Toledo, Ohio), April.

113.— Hallucination: A Personal Experience. J. T. Woods.
114.— Eczema. J. L. Baird.
115.— Influenza. E. E. Armstrong.

Medical Mirror (St. Louis, Mo.), April.

116.—*Home Treatment of Consumption. William Osler.
117.—*Night Air of New England in Treatment of Consumption. C. S. Millet.
118.— Surgical Operations. How I Perform Them in the Home of my Patients. R. H. T. Mann.
119.— Treatment of Constipation. Joseph M. Mathews.

Western Clinical Recorder (Ashland, Wis.), March.

120.—*Pneumococcus Infection. Frank Billings.
121.—*Induction of Premature Labor. Jos. B. DeLee.
122.— Syphilis from a Dental Standpoint. L. Blake Baldwin.

Fort Wayne Medical Journal-Magazine, March.

123.— Some Moot-points in Management of Fractures. Chas. Stoltz.
124.— The Angiotribe. J. H. Carstens.
125.— Intravenous Transfusion of Normal Salt Solution, with Special Reference to its Use in Surgery. Miles F. Porter.

Medical Register (Richmond, Va.), January.

126.—*Treatment of Cancer of Cervix of Uterus Complicated by Pregnancy. George Ben. Johnston.
127.—*Use and Abuse of Vaginal Douche. I. S. Stone.
128.— Organotherapy: Some Clinical Uses. Clifton M. Miller.
129.— Congenital Measles, with or without Symptoms of Disease in Mother: Report of Four Cases. C. W. Keel.

Medical and Surgical Bulletin (Nashville, Tenn.), March.

130.— Bubonic Plague. Thomas L. Maddin.
131.— Treatment of Croupous Pneumonia. W. G. Ewing.

Iowa Medical Journal (Fort Dodge), March.

132.— Nasal Accessory Sinus and Middle Ear Complications of La Grippe. F. H. Boucher.
133.— Self-Medication. Wm. B. Doherty.

Medical Examiner and General Practitioner (N. Y.), April.

134.— Extra Rating of Unhealthy Lives. E. Symes Thompson.
135.— Medical Examiner: What He Does and Why He Does It. Geo. W. Wells.
136.— Can Beginning Pulmonary Tuberculosis be Diagnosed Through a Shirt? Andrew H. Whitridge.

St. Louis Clinique, April.

137.— Licensing of Carnal Houses. Amzi S. Plummer.
138.— Some Newer Therapeutic Agents. C. W. Lillie.

American Therapist (N. Y.), February.

139.— Superiority of Holocain to Cocain for Certain Ophthalmic Operations and Diseases. Edward Jackson.
140.— Another Illustration of Value of Elevated-Hip Position in Difficult Labor. Abram Brothers.
141.— Is Cancer Curable? J. M. G. Carter.

Medical Summary (Philadelphia), April.

142.— Abnormal Labor: Malrotated, Persistent Occipito-Posterior Position of Fetal Head, Face to Pubis, Causing Lingering and Dangerous Labor. T. C. Comstock.
143.— Treatment of Catarrh of Nose and Throat. S. D. Sour.
144.— Accurate Science of Bacteriology. A. T. Cuzner.
145.— Can We Really see with Our Eyes or the Brain. J. Waterloo Dinsdale.
146.— Gelsemium and its Active Principles. W. C. Buckley.
147.— Complicated Case of Obstetrics. Louis J. Pons.
148.— Biochemistry. C. C. Edson.

St. Louis Medical and Surgical Journal, April.

149.— Antinosin in Skin Grafting. R. F. Amyx.
150.— Pseudoleukemia: Report of Two Cases. A. L. Ohmann-Dumesnil
151.—*Technique of Excision of Superior Cervical Ganglion of Sympathetic for Glaucoma. James Moores Ball.

Seaboard Medical and Surgical Journal (Norfolk, Va.), March.

152.— Some Remarks on Ethics. Israel Brown.
153.— Progressive Procedures in Bone Surgery. James N. Ellis.

Journal of Medicine and Science (Portland, Me.), March.

154.— Development of Serumtherapy. W. H. Kimball.
155.— Rheumatism. S. J. Bassford.
156.— How Much May We Expect from the Treatment of Cretinism? H. B. Palmer.
157.— Bacteriology. C. A. Peaslee.
158.— Electric Communications Around the World. Franklin Staples.

Regular Medical Visitor (St. Louis, Mo.), March 15.

159.— Uterine Cancer and Its Treatment. Thomas More Madden.
160.— Chronic Catarrhal Pharyngitis. O. F. Baerens.
161.— Case of Bichromate of Potash Poisoning. John Dillon Thompson.
162.— Cosmetic Treatment: Some General Observations. E. E. Holt.
163.— Physician and Law. Norwood Fitch.

Southern Practitioner (Nashville, Tenn.), April.

164.— Intestinal Obstruction. (*Continued.*) Richard Douglas.
165.—*Smallpox. Its Successful Abortion and Treatment as Originally Suggested and Adopted by Dr. Thomas Crutcher Osborn. S. H. Stout.

Texas Medical Journal (Austin), March.

166.— Is Fever a Conservative Force? J. W. Embree.
167.— Something Needed for Worthy Doctor to be Appreciated. R. H. Simpson.
168.— Instrumental Delivery. A. R. Kuykendall.
169.— Abortion: Spontaneous and Induced. J. A. Winfrey.
170.— Ossification of Choroid. James Moores Ball.

Texas Clinic (Dallas), March.

171.— Epilepsy. J. S. Turner.
172.— Some Familiar but Neglected Topics. F. W. Gallager.

American Journal of Surgery and Gynecology (St. Louis, Mo.), March.

173.— Infection from old Hematoma: Peculiar End of Hernia: Parovarian Cyst: Suppurating Cystoma: Hysterectomy for Pus Tubes Rufus B. Hall.
174.— Surgical Intervention for Severe Intestinal Hemorrhage Complicating Typhoid Fever. Edwin Ricketts.
175.— Appendicitis Simulated by Hydrosalpinx with Twisted Pedicle. J. F. Baldwin.
176.— Examination of Gut in Recent Successful End-to-End Anastomosis. Geo. W. Crile.
177.— Ovarian Pregnancy; Report of Case at Full Term. B. Merrill Ricketts.
178.— Protoscopy Under Difficulties. Thos. Chas. Martin.
179.— Management of Hypertrophied Prostate Gland. Frank Warner.
180.— Report of Three Cases of Gunshot Wounds of Abdomen. Clarence S. Miller.

AMERICAN.

1. **Contagion of Insanity.**—The contagion of insanity is illustrated by a number of cases reported by Jelly, who points out the characteristics of the condition, and its pathogenesis, which is that of sympathy and suggestion, its diagnosis, and its prognosis, which is good unless there is bad heredity. The first thing in treatment is separation, which is usually followed by recovery.

2. **The Angiotribe.**—The introduction of this instrument into America is due to Dr. Clement Cleveland, to whom Goffe gives due credit. The instrument is illustrated and described, and its advantages stated: 1. The superiority of this method of controlling the blood-vessels over the former method of applying forceps. More and more room is gained with each application. 2. The handles of the forceps protruding from the vagina were a great source of annoyance and discomfort to the patient. Moreover, the forceps had to be removed at the end of thirty-six or forty-eight hours, and in a certain proportion of cases hemorrhage occurred from the tissue adhering to the forceps and being torn away as they were withdrawn. After the use of the angiotribe none of these disturbances arise; convalescence is smooth and comfortable. There is very much less pain after using than by either the old forceps application or use of ligatures. 3. It is superior to ligatures in two respects: it is more easily and quickly applied and it is attended by less discharge during convalescence. The angiotribe has also a field of application in dealing with hemorrhoids.

5. **Diffuse Septic Peritonitis.**—The principal point made by Fowler is that the pelvic peritoneum possesses certain resistant powers to infection which are not shared by those portions situated above, hence he advises posture to facilitate drainage into the pelvis in cases of septic infection. Nine cases are reported in which this method was used, all ending in recovery. The two points in the treatment, on which he feels ready to speak with confidence, are the advantages of the employment of the elevated head and trunk position and the drainage of the pelvic cavity, at least by means of properly-placed and protected glass drains. He thinks transference of the septic fluids from the most dangerous areas of this enor-

mous lymph sac to a less dangerous region, and removing these from the latter by proper means of drainage, constitute not only a rational but an imperatively-demanded procedure.

6. **Hypodermoclysis.**—Kemp suggests the choice of the iliolumbar region, especially laterally, as the locality for the hypodermoclysis. The specific effect of this procedure on the renal secretion is especially valuable where it is desirable to stimulate urinary secretion. The elimination begins in four or five minutes. The rapid absorption, however, is modified by certain clinical conditions, as in the uremic states, and this should be considered; sloughing has occured in the breast, from too great or rapid injection of saline solution. In certain cases, however, where the rapidity of absorption is lessened, it is of much value, as in hemorrhage from typhoid or gastric ulcers. The method also appeared to be of some value in cases of poisoning by alkaloids, and he suggests it in belladonna poisoning, while it is worthy of trial in that from opium. Hypodermoclysis has been found to be of value in pleurisy with effusion, and in enterocolitis in infants and children, also as an eliminative in diphtheria, following antitoxin injection, and in nephritis complicating diphtheria. Dawbarn's method of using hot saline injection is an excellent one, but in some cases should be preceded by a preliminary saline hypodermoclysis. In conclusion, he describes an apparatus for converting the hypodermic needle into a needle for hypodermoclysis.

7. **Nitrous Oxid and Ether Anesthesia.**—Carter calls attention to the apparatus advised by Dr. T. L. Bennett for the combined administration of nitrous oxid and ether anesthesia, which he thinks is, in some respects, superior to the Clover-Hewitt apparatus used in Great Britain. The most of his paper is taken up with the details of the administration.

8. **Chronic Vertebral Rheumatism.**—After first noticing the papers by Zenner and Dana on spondylitis Forestier describes a pseudoneuralgic form of chronic vertebral rheumatism characterized by: 1. Temporary rigidity of the vertebral column, without any ankylosis from muscular contraction, giving the patient a peculiar stiff gait; these symptoms depend on the pain which the patient feels when he moves the trunk. 2. Predominant pseudoneuralgic pains; pains radiating from the back through the lower limbs, simulating in some instances either tabes or pachymeningitis spinalis externa, or even Pott's disease. 3. Coincidence of arthritis involving some peripheral joint, showing there is a rheumatic process. 4. Curability under such treatment as the Aix-les-Bains douche-massage, the recovery showing that the pathologic process may be considered as rheumatic. This, he thinks, has been noticed in textbooks. Five cases are described. There is no deformity of the spine. The subjective symptoms are: pseudoneuralgia, various pains irradiating from the back, intercostal, girdle and sometimes shooting pains in the limbs. No paresthesia, no trophic changes, no muscular atrophy exist; as a rule the knee-jerks are exaggerated. The clinical feature which differentiates this from the ankylosing type is the fact that it is curable.

9. **Treatment of Superficial Wounds Without Sutures.**—Whitbeck thinks that absorbent cotton and collodion will suffice to produce prompt and good union of superficial incised and lacerated wounds. After free asepsis of the skin the edges of the wounds are brought together and secured by cotton and collodion alone, or narrow strips of isinglass plaster moistened by bichlorid solution or by some strips of muslin or linen painted over with a thin coat of flexible collodion. After this the thinnest possible layer of absorbent cotton is applied and, if there is a little blood oozing, it will help the dressing, discoloration being only slightly objectionable. He has used this method in various injuries of the scalp, head, face, thigh, etc., and thinks that its advantages are obvious. It makes a finer and better cicatrix than do sutures, and in suitable cases will not fail.

15. **Apparent Death.**—Garrigues notices the signs of death and their value, and holds that the law should require the personal inspection by the physician who signs the death certificate, and the filling of blanks giving the most important signs that are present or absent, and that until the death certificate is signed the supposed dead should be treated as a living person and nothing done that would cause him pain or do him harm if he were alive. This would prevent bodies being put on ice, embalmed, etc., before the death certificate was signed.

16.—See abstract in THE JOURNAL of February 17, p. 422.

18. **Psychic Insult and Death.**—Pagenstecher's paper reports the case of a man who had suddenly died after slightly scratching his hand. Apparently under the impression that he had got blood-poisoning in the wound he begged for amputation of his arm. There was active delirium with various delusions, followed by great weakness. There was no fever, but a quiet pulse and the patient could be aroused at any time. Twenty hours after injury there was an incomplete crisis with profuse sweating; death followed thirty-two hours after injury, and was entirely unexpected. As the man was carrying a very large life insurance the case was brought up in court and several theories as to his death were suggested, one that he committed suicide with curare, one of malingering throughout, and one that tetanus was the cause of death. He offers the case as a peculiar one of some medicolegal importance and unique in some of its features.

19. **Penetrating Wound of Chest.**—The symptoms and conditions of penetrating wounds of the chest are described and a case reported by LeConte. He concludes that when the wound of the lung is giving only slight hemorrhage, it is best to close the external wound with gauze and watch for the physical signs of bleeding. When the hemorrhage is more marked, he says to open the chest, insert a small drainage-tube, and regulate the admission of air according to the difficulty of respiration in the patient. When the hemorrhage is large and its symptoms alarming, open the chest and insert a large drainage-tube, so as to form a rapid and complete pneumothorax, and at the same time, when necessary, inject salt solution into a vein. When this does not control the hemorrhage, resect one or more ribs, and deal radically with the bleeding. In severe hemorrhage from a lung, the first object of treatment should be to get pressure on that lung. By opening the chest air will do this as well as blood in the pleura; it will do it instantly instead of waiting until a sufficient amount of blood has been poured out; it will save to the patient the amount of blood necessary to exert this mechanical pressure; it will permit the vessels to close by clots, and the remote benefits are that it eliminates the dangers of pyothorax or of universal adhesions of the pleura. He does not think that the fact that danger of engorgement of the right side of the heart is serious in full-blooded dogs would necessarily make it so in an exsanguined man, as the cases are not parallel. While these views are his own, he admits they are not indorsed by the majority of surgeons, but he gives them as the results of his experience.

20. **Malaria.**—Woldert reports a case of estivoautumnal fever with tertian paroxysms, originating in Philadelphia, and describes Futcher and Lazear's stains for malarial parasite, giving also one of his own. "By this method the specimen must be fixed by heating at 115 C.—239 F.—for fifteen or twenty minutes and stained. The formula for making the stain is as follows: Solution No. 1—toluidin-blue, 15 grains; distilled water, 3ij; solution No. 2—acid fuchsin, 15 grains; distilled water, 3ss; solution No. 3—2 per cent aqueous solution of eosin. To No. 1 he adds 20 drops of No. 2, and afterward 20 drops of No. 3. When these are mixed together a reddish stain is produced, in the bottom of which a heavy precipitate occurs. It is essential that the solutions be mixed in the bottle from which the stain is to be subsequently used, as the precipitate seems to be of advantage in the "ripening" process. After fixing by heat, the specimen is stained for five minutes in the cold, washed in water, dried, and mounted in Canada balsam. By this method the malarial parasites are stained blue, the red cells a faint pink, and the nuclei of the leucocytes blue. The pigment granules of the malarial organism remain a very dark color. The parasites are easily found by this method.

21. **Uremia.**—Krauss reports a case occurring in a person with a fair secretion of urine containing no albumin, in whom there were unilateral convulsions and paralysis of the opposite side. No lesion of brain was found on autopsy.

23. **Malignant Diseases of the Pericardium.**—The rarity of the occurrence of malignant growths of the pericardium make the case reported by Williams and Miller of considerable in-

terest. It was in a boy, 13 years of age, who had been troubled with some peculiar symptoms, and the post-mortem showed a small-celled, diffuse sarcoma of the parietal pericardium, which is illustrated. The origin of it is discussed by Williams, who concludes, from the absence of glandular enlargement elsewhere, the uniform thickening of the pericardium and freedom of epicardium from invasion, that it must have originated in the lymphatic layer of the pericardium itself.

24. **Perineorrhaphy.**—The principle to which Mabbott calls attention is that of the effects of pressure or tension by sutures, which is toward the center and equal from all directions; hence sutures placed in the elliptical form tend to produce circular pressure, and the point here made is that we should put the suture in the perineum so deeply into the tissues that when drawn tense it may coapt the parts without longitudinal compression, the whole tissue enclosed in the suture being circular, so that the rent is not distorted. The paper is illustrated by diagrams which explain it better than can be done by text. The author thinks what is true of primary operations is equally so of secondary. The sutures should be passed so deeply in the tissues that the coapted surfaces will not be contracted or wrinkled. Make the sutures include enough tissue on both sides of the wound to enable them to exert their greatest traction in the right direction and hold the wound surfaces together in their natural relations.

25. **Gunshot Wounds.**—Borden gives the general results of his observations, 202 in number. He finds that perforating and penetrating wounds by the compound modern bullet are usually aseptic, that the shock and injury to tissue are slight provided no important nerve or vessel is injured, that in the bone it produces some comminution which may, if near the joints, give rise to some impairment of function. The wounds of exit are often smaller and seldom larger than the wound of entrance, and are little influenced by the tissue through which the bullet has passed. Lodged bullets are usually due to long range or to ricochet, and seldom produce immediate harm in the tissues. The proportion of killed to the wounded has not been increased. As regards surgical methods, asepsis and antisepsis have been the greatest factors in reducing the number of complications and mortality; excellent results are derived from the first-aid packages. The bullets remaining in the tissues usually give rise to discomfort and disability sooner or later, hence removal should be done, but deferred until aseptic conditions are available. The Roentgen rays are of the greatest value in military surgery, and where they show the need, there should be no hesitation in operative interference, or where there is displacement of bone, everything being done under aseptic methods. Surgical asepsis is impossible in the field or in field hospitals, and operative interference there should be restricted to measures imperatively demanded to save life or decrease the probability of death where transportation without operation would be more dangerous than possible septic infection from immediate operation. The transportation of the wounded to permanent base hospitals should be facilitated as much as posible.

27. **Books Injurious to Eyes.**—Injuries to eyesight, from books, may occur in three ways: 1, reading on curved surfaces, which is the rule; 2, light reflection when reading from such a surface; 3, long lines running the entire width of the page. The only way to avoid the first trouble would be to have the lines run parallel to the binding instead of at right angles to it, and this would also aid in lighting the book from the side and avoiding reflections. The great width of reading columns is tiresome to the ocular muscles and often requires movement of the head. Where this is not done fatigue is very much increased.

28. **Ankylostomiasis in Porto Rico.**—Ashford describes the disorder due to ankylostoma duodenale which is the most destructive and general disease of Porto Rico, largely prevailing in the poorer classes and due to their unsanitary habits and underfeeding. He describes the condition at length. It is characterized by pallor, passive expression, anemia, often hypostatic congestion of the lungs, sometimes anemic ulcers, pernicious secondary anemia, hemic murmurs, very low proportion of red globules and hemoglobin, marked eosinophilia, no leucocytosis due to the disease itself, frequent presence of normoblasts, sometimes megaloblasts, poikilocytosis and the utter uselessness of blood tonics unless the parasite is dislodged. He thinks that with the improvement of sanitary conditions the disease can be to a considerable extent controlled.

29. **Blood Transfusions.**—Head reports experiments in transfusions of the blood, to support his theory that vitality is increased by the assimilation of protoplasmic cells in this way.

34. **Postclimacteric Hemorrhages.**—Importance of attention to any colored discharge occurring after the change of life is emphasized by Lockhart. He points out the conditions which produce it and their distinguishing marks from carcinoma. One of these is the senile simple endometritis of the hemorrhagic variety; in this the hemorrhage is in the form of constant oozing instead of gushes of blood, and the fluid is inclined to be dark and mixed with mucus. General oozing is almost always characteristic of senile hemorrhagic endometritis. It has been said that in extensive atheromatous changes generally the uterus is also thus affected, but Lockhart rather doubts this and thinks that the uterus may be entirely free from the condition though the other organs are extensively involved. In addition to these conditions we have hemorrhages from subcutaneous fibroid, but it is rare to not have this manifest itself until after the climacteric. In cases of small tumors it may be difficult to diagnose, but the steady oozing of blood and lack of cachexia are against the existence of cancer. If after pathologic examination by the curette, the disease is described as benign, it should be watched carefully for several months. If the hemorrhage should return after the second, or at most the third, curettage, Lockhart would strongly advise removal of the uterus. In a case where there is a reasonable doubt, the safe side is hysterectomy.

38. **Thyroid Extract in Psoriasis.**—Acting on the suggestion of Bramwell and Barclay, Hays tried thyroid extract in three cases of psoriasis, without any satisfactory results. He does not think the promise of this remedy good in this disease.

46. **Esophageal Diverticula.**—Jung reports a case of esophageal diverticula, in detail, which he tested by various methods. He suggests that it will be well to consider the following points in the differential diagnosis of this condition: 1. With dilatation as well as with diverticula there occur painful cardiospasms (Kelly, Jung), as well as painless cases (Reitzenstein). 2. In both vomiting occurs from the esophagus, occasionally from the stomach. Even in cases of typical cardiospasms eructation from the stomach may occur. 3. If food eaten one or two days before is vomited while other food eaten in the meantime remains down, the case seems to be one of diverticulum. No observations to the contrary have so far been made. 4. The swallowing sounds are abnormal in all cases of dilatation. In cases of diverticula the swallowing sounds are audible in 33 per cent., and can be used for diagnostic purposes (Kelling's method). Westphalen's sound can also be heard in diverticulum with dilatation of the esophagus (Jung). 5. If after emptying the esophagus it is easy to enter the stomach, a diverticulum probably exists (Mintz, Reichmann). Yet the passage of the tube may be difficult. "Only once out of ten experiments does one find the cardia and gain entrance into the stomach" (Reitzenstein). 6. In making Rumpell's test, proof must be furnished that the tube is actually in the stomach. Inflation in this case is impossible, as feeling of the sound is not always practicable. 7. The proof positive of having entered the stomach is obtaining gastric juice through the inner tube (Jung). 8. Mercier's sound or Leube's diverticulum tube are necessary in order to find the entrance into the stomach. These tubes must be perforated for the diverticulum test, and by means of a thin inner tube gastric juice can be brought up. 9. After a diverticulum has been diagnosed, its height can be ascertained: *a*, by Kelling's test—swallowing sounds—and, *b*, by filling the diverticulum with a colored solution and putting a narrow strip of white adhesive plaster longitudinally on the tube. 10. Neubauer's experiment for ascertaining the level of the liquid can also be used, according to Kelling, to determine the entrance into the diverticulum. 11. The entrance of the diverticulum can easily be overlooked by esophagoscopy. 12. Gastrodiaphany did not show the diverticulum in Mintz's case, and gave no information about the kind of enlargement. In

Reitzenstein's case it was impossible to diagnosis diverticulum by gastrodiaphany alone. 13. X-rays show an enlargement of the esophagus only. 14. The statements of even the most experienced patient, that the tube is in the stomach, are often erroneous. The bending of the tube gives the patient and physician alike a sensation as though it had entered the stomach.

49.—See abstract in THE JOURNAL of March 3, p. 560.

51. **Electrolysis of the Eustachian Tubes in Chronic Tubal Catarrh.**—Duel reports three cases in detail, and tabulates some fifty in which electrolysis was therapeutically employed for the relief of chronic obstructive catarrh of the Eustachian tubes. He presents the following conclusions for consideration: 1. The pathologic process in inflammatory conditions of the Eustachian tube and the tympanum is the same, i. e., hyperemia, followed by the exudation of round cells, which organize into new connective tissue, and subsequently atrophy. 2. The names "chronic tubal catarrh" and "chronic catarrhal otitis media," then, should suggest only a difference in position of the inflammation and not in its character. 3. Where the affection is confined to the tube, the impairment of hearing is functional, and is restored as soon as the normal patency of the tube is effected. This is true also of tinnitus and vertigo. 4. Tubal obstruction is present early in a very large percentage of all cases of chronic hypertrophic catarrhal otitis media, and in such instances is one of the chief contributing causes to the further advancement of the disease within the tympanum. 5. It is our duty, then, wherever there is a stenosis of the Eustachian tube, to remove the obstruction as rapidly as possible. 6. In every instance where the obstruction is due to an organized exudate, the best method for its removal is electrolysis, for the following reasons: *a*. It is more rapid. In several instances one application of the electrolytic bougie has been sufficient to cause the reabsorption of the deposit, and in the majority only a few applications have been necessary to secure a patent tube. *b*. It is more efficient. The disappearance of the exudate results from electrolytic action and not by mere pressure, as in other methods of dilating strictures, and consequently requires less force. There is, therefore, less danger of traumatism. The electrolytic bougie has been easily passed through strictures which were so firmly organized that it was impossible to pass a cotton bougie. *c*. The results are more permanent. A stricture once removed by this method is permanently removed. The primary cause, acting again, may bring about its reappearance, but by careful attention to proper treatment a large percentage of the tubes may be kept patent. 7. The removal of obstructions in the Eustachian tube is only a large factor in and not the whole treatment of chronic tubal catarrh and chronic catarrhal otitis media. 8. The prognosis in any given case depends largely on the amount of injury to the tympanic structure. Where inflation is followed by marked temporary relief of deafness, subjective sounds or vertigo, one may expect brilliant results from the establishment of the patency of tubes. Where no temporary improvement follows inflation, much may be accomplished, although the results are by no means so certain. The narrow tube should be opened, nevertheless, in every instance, with the hope of checking the advance of the disease. In a word, then, the writer wishes to make the points that: 1, all narrow tubes should be restored to their normal caliber; and, 2, where the narrowing is due to an organized inflammatory exudate, the best means of accomplishing this is by electrolysis.

55. **Surgery in Glycosuria.**—From his own experience and the observation of others, Fisk concludes that the presence of glycosuria in those individuals who have surgical diseases does not in itself constitute contraindication to any and all surgical relief. Good judgment must be used in the selection of cases and in the determination of the kind and extent of operation to be performed. Strict surgical asepsis must be observed. When infection does not occur the operative wounds heal kindly, but slowly, especially in granulating wounds. The vascularity of the tissue must be interfered with as little as possible, and this must be kept in mind in any operation, particularly so in gangrene of the extremities, where experience shows the necessity of high amputation. He thinks it better to cut down on and ligate the artery in these cases rather than use the Esmarch band.

57. **Traumatisms Inflicted by Animals.**—Reed discusses the supposed existence of greater danger of hydrophobia or tetanus from wounds inflicted by animals, and reports two cases where lacerations were very extensive but only constitutional disturbances occurred, due to ordinary suppurative infection. He thinks it advisable to in such cases convert all punctured wounds into open ones by free incision, to avoid the dangers of infection.

58. **Fixation Plates in Limb Fractures.**—Steinbach reports on his method of using silver plates with screws to keep the fractures of the long bones in proper apposition, and reports four cases, illustrated by skiagrams. He finds the plate a harmless tenant in the leg, and leaves it in position until bone union has taken place. Its removal is then accomplished under local anesthesia.

59. **Cholecystitis, Jaundice and Gall-Stones.**—MacLaren believes jaundice a very much overrated symptom and the passage of gall-stones a rather unusual occurrence. Inflammation of the gall-bladder is the first step in the majority of cases and gall-stones are rather a symptom than a disease. Since his attention has been called to this subject, he has seen only one case which did not show either past or present evidence of inflammatory action in the gall-bladder.

60. **Hermetic Sealing of Aseptic Wounds.**—The condition of soil is of importance only second to that of seed which may be planted in it, in this matter of infection, according to Marcy. The advice he gives in wound technique is the recognition of the vitalized structures with which we have to deal, and to injure them by clean dissection as little as possible; to remember that even the largest vessels require comparatively little force for their occlusion, and that coapted, well-vitalized structures held at rest furnish a minimum of exudates; that it is of first importance to preserve these; that on this account the drainage-tube has been wisely abandoned, as harmful as a foreign body. He speaks of the importance of thoroughly antisepticizing the suture material and the advantages of rubber gloves in preventing possible epithelial-cell infection. He thinks that iodoform collodion, strengthened by a few fibers of cotton, is an ideal dressing for the purpose of preventing subsequent infection. Subsequent dressing is of no avail except to keep the parts from extraneous injury. The one operation should be final for good or evil.

61.—See abstract in THE JOURNAL of February 17, p. 426.

72. **Landry's Paralysis.**—Taking as a text a typical clinical case in which the post-mortem findings were rather negative as regards peripheral nerve degeneration or an exciting bacterial infection, Taylor and Clark discuss the literature and the inconstant pathology of the so-called disease, and conclude that inasmuch as there is no essential constancy in the clinical symptoms, nor in the pathologic findings of so-called Landry's paralysis, and inasmuch as the etiology is wholly vague, it is probable that the affection does not represent in itself a process to which the term "disease" may properly be applied, and that, therefore, it is desirable to drop the term, as unnecessary and misleading.

73. **Unilateral Ascending Paralysis.**—Mills describes a case of gradually ascending paresis of the right side, with temporary hyperesthesia, wasting of muscles, retention of sensation and faradic reaction, exaggerated knee-jerk, but diminished plantar reflex on the right, and normal ocular and pupillary symptoms; no spasm nor contracture. The clinical picture does not correspond fully with any known disorder, and he is inclined, from this and other somewhat similar cases, to a diagnosis of a slowly increasing degeneration of the pyramidal fasciculi or the cerebral motor neuron system.

77. **Inguinal Hernia.**—After noticing the operative methods for the relief of inguinal hernia, Scully describes his method of treating it by injection, which consists in the use of a formula containing fluid extract of white oak bark, ʒiss; solid extract of white oak bark, ʒiss; with carbolic acid and iodin, each ʒii; and morphin, gr. x. It is important that a perfectly fitting truss should be used before and after injection. After antiseptic cleansing of the part the needle is introduced over

the site of the internal ring and pushed down until it passes the end of the finger pushed into the canal. Three to five minims should be injected. As the finger is withdrawn the needle is made to follow it for about one-half inch, during which time the fluid is still being injected, and when twenty minims have been injected the needle should be withdrawn suddenly to avoid depositing any of the fluid in the subcutaneous tissue, where it would cause intense burning. The truss should be placed in position immediately, and the patient lie down for about half an hour. If there is much pain, placing a hot-water bag over the site will soon ease it. The injection should be repeated once a week for three or four weeks when, if the hernia does not come down after taking off the truss, and having tested it by the patient coughing or stooping, no more injections need be given. The truss should be worn at least four weeks longer. During the last eight years he has treated 148 patients in this way. Of 28 double hernias, none were cured, but all were benefited so that the truss was retained with more comfort. Of 120 single hernias, 50, or 48 per cent., were successful one year from the date of last injection. In 16 children treated included in the 58, all were successful; none had more than two injections. He thinks that we can promise cure in recent inguinal hernia by this method. Cases of long standing can only be relieved in some cases, and operation is the elective method in such.

78. **Enzymes and Immunity.**—McClintock believes that the means of defense of the system against disease is through enzymes. He questions whether we can produce these outside the body and lend them where there is need—probable though not fully proved.

79. **Pneumonia.**—The treatment of pneumonia as enforced by our knowledge of it as an infectious disease is discussed by Crook, who reviews the physiologic action of calomel, quinin, salicylic acid, and creosote, and points out the unanswered questions in regard to the action of these remedies. After a careful survey of the field, he thinks the following conclusions are forced upon us: 1. The discovery that pneumonia is an infectious disease and the recognition of its pathogenic microbe increase the hope that an abortive or specific form of medication will be brought to light. 2. Recent research strongly indicates that our chief reliance for an improvement in our present methods of treatment rests in the elaboration of a satisfactory form of antitoxin. 3. The use of antiseptics for the destruction of pathogenic microbes in the tissues is very limited. Pathologic chemists as well as clinical observers now recognize the hopelessness of attempting to discover any single body which will destroy all forms of bacteria in the system while leaving the host unimpaired. The discovery of specific remedies for several diseases, however, shows that certain agents act more powerfully on the cause of disease than on the tissues of the patient, and inspires the hope that the list of conditions thus yielding to specific medication may be extended. 4. Coming to the consideration of pneumonia, however, it must be confessed that little actual progress has been made in this direction. It would appear that the field has not been sufficiently traversed by the pathologist and the chemist to light the way for the clinician. Several facts in connection with the natural history of the micro-organisms concerned in the disease still require elucidation, and we should have fuller information concerning the antiseptic solutions and the strength of these required to exterminate the microbe, before we can proceed intelligently or safely. In the treatment of pneumonia, we should remember that it is self-limited, and its tendency is to recovery if we can keep the patient alive a few days; therefore, while we may cautiously test the new germicidal remedies, we should not widely depart from an intelligent expectant form of treatment.

80.—See abstract in THE JOURNAL of February 24, p. 493.

86. **Hypertrophic Pyloric Stenosis in Infancy.**—From a review of the cases in literature, and their analysis, to which he adds a report of one of his own personal observation, Pritchard concludes as follows: 1. The hypertrophy is secondary to overaction of the sphincter, and the stenosis chiefly due to spasm. 2. The stenosis as measured "post-mortem" is but an accurate gauge of its organic degree during life. Overaction and inco-ordinated contractions of the sphincter may be due to some fault in the nervous mechanism. 4. Injudicious feeding, either quantitatively or qualitatively may be a contributory factor of the nervous inco-ordination.

87. **Kernig's Sign in Infants.**—The value of a positive sign in the meningitis of children led Packard to observe for the occurrence of Kernig's sign, so valuable in adults. He reports three cases in which it was not found, and, while he would not be considered as endeavoring to belittle its value, he calls attention to the possible error that might arise from attaching too much importance to it in the case of infants. In these three patients meningitis was determined by autopsy. All were under 18 months of age, and in all the sign was absent during life. A question still to be solved is at just what age this sign becomes significant; its value in older children can not be denied.

88. **Congenital Goiter and Diaphragmatic Hernia.**—Abt reports and illustrates a case of this condition and discusses the pathology.

89. **Treatment of Whooping-Cough.**—Two methods of treating whooping-cough are especially studied by Norton, the administration of carbonic acid gas by the rectum and the use of the O'Dwyer laryngeal tube. The former was tried in 150 children. In 143 there was apparently decided benefit. The vomiting ceased even in serious cases, on the second or third dose. The number of paroxysms was reduced and their severity diminished. The other seven were not benefited. The only ill effect to be possibly attributed to the method was a mild diarrhea in a few patients, probably due to irritation of the rectal tube. O'Dwyer's tube has been tried in three cases of complicated whooping-cough and laryngeal diphtheria. The effects of the tube on the larynx on whooping-cough were interesting. There were the signs of beginning paroxysm, excitement and the desire to hold on to something for support, followed by spasmodic cough of usual length, sometimes even causing cyanosis, but there was no glottic spasm. Air entered the lungs freely and paroxysms terminated abruptly without the least distress or vomiting. After the removal of the tube the symptoms were the same as before its insertion. He thinks O'Dwyer's views of the usefulness of this appliance in serious cases of whooping-cough appear well grounded.

90. **Drugs in Whooping-Cough.**—Kerley reports experiments with quite a number of drugs in this affection, systematically undertaken and the results recorded. His conclusions are: 1. Every case of whooping-cough may be ameliorated either by modifying the severity or by diminishing the number of paroxysms. In many both the severity and number of paroxysms may be favorably influenced. 2. Remedies, sedative in character, with fresh air, furnish the best results. 3. If a remedy is to be of service its beneficial effects will be noticed within twenty-four hours, and always within forty-eight. 4. The best results are obtained when the antipyrin and bromid are commenced at the height of the paroxysmal stage, and then pushed. 5. These remedies being sedative in character, the effect may be lost in a prolonged case, requiring a change of treatment. 6. Children may have whooping-cough and never whoop.

99. **Subnormal Temperature.**—Three cases of subnormal temperature in the insane are reported by Tomlinson; one was a terminal dement in an agitated and depressed condition, and the pulse fell to 94, at which point it remained for nearly a month. During this time he passed into a condition of profound urinemia with extreme emaciation. The second case was that of a woman in whom the temperature went below the scale of the thermometer, and as nearly as could be estimated was about 90 F. after a spell of violent agitation. It arose to 108 F. at the time of her death. In the third case, one of terminal dementia, the temperature was subnormal during the greater part of a year, going as low as 88 F. just before death. In all these cases there was kidney disorder, and he remarks that in looking over his case records he finds subnormal temperature practically always present in cases of uncomplicated degenerative disease of the kidneys, and he associates the two conditions.

107. **Gynecology on the Insane.**—Hall reports a large num-

ber of additional cases of gynecologic operations on insane women, insisting on his former views of the necessity of such measures and their value.

108. **Diseases of Digestive Tract.**—Power believes that the clinical examination of gastric contents is too much neglected, and as an evidence gives the results of examination of 25,000 prescriptions found in California drug stores. They gave no evidence of the present state of knowledge of hyperchlorhydria, and many of them were rather inconsistent and futile. The small use of intestinal disinfectants was also notable.

116.—See abstract in THE JOURNAL of Nov. 25, 1899, p. 1360.

117.—Ibid.

120. **Pneumococcus Infection.**—Billings reports a case of general pneumococcus septicemia in a child, and others of localized pneumonia complicating otitis media, and also of general pneumococcus septicemia with little or no lung involvement. The cases are illustrated by temperature-curves.

121. **Induction of Premature Labor.**—The indications for the induction of premature labor are four: Contracted pelves, disorders incident to pregnancy, those which are accidental to pregnancy, and in certain cases where habitual death of the fetus occurs before term. In contracted pelves, De Lee objects to premature induction of labor combined with symphysiotomy, on account of the danger to the child. The question whether the patient will be allowed to go to term is a difficult one, and all the circumstances must be considered. The question must be laid before the mother and the dangers described, but the physician can sway the judgment of the patient as he thinks best, and should advise one of the graver operations at term only under the most favorable circumstances. As to the diseases incident to pregnancy, eclampsia is first considered, and his teaching is that treatment should be at first purely medical, but if in spite of this the convulsions increase and are more severe, the pregnancy should be interrupted, and if labor should be spontaneous, everything should be done to hasten it. If, however, medical treatment succeeds, he allows the patient to go to term under proper hygienic precautions. As a rule, the kidney of pregnancy does not produce dangerous symptoms, but it is hard to draw the line between it and Bright's disease. In placenta previa there is no expectant plan. As a rule the child is viable when the symptoms become marked. Induction of premature labor is demanded unless proper medical attendance can be had. Chorea aggravated by pregnancy may be a fatal disease. Premature labor not unfrequently occurs, but it may be too late. Pernicious anemia is a very fatal disease during pregnancy, and often premature labor can not prevent death. Uncontrollable vomiting of pregnancy usually occurs before the child is viable, and the question is whether or not to induce abortion. Experience, he thinks, will show there is less and less cause for induction of premature labor in this condition. Early diagnosis and recognition of the condition will enable the physician to put the patient under the best possible surroundings and obviate the necessity. When the time does come when the condition is very serious a proper conscientious medical treatment should precede the operation. Among the accidental ones Bright's disease is the most common. When it is determined, the patient should be kept under constant observation and tided through if possible, but then the symptoms increase and eclampsia threatens, interference may be unavoidable. Ten days is the limit he gives for observation in these cases. Tuberculosis is a very difficult question, and tuberculous women should not bear children. Insanity does not justify the operation except in rare cases. Carcinoma, if confined to the cervix, does not indicate the induction of premature labor If carcinomatous disease is too far advanced to permit a radical cure, it is probably better to let the patient go to term and then do Porro's operation. Under the fourth general heading we have the indication, occasionally, but the cause can not be determined. In that case he treats the woman and sometimes the man for syphilis. As to the conditions for induction of premature labor, before the twenty-eighth week there is little chance for a living child and not much before the thirty-second. The child must be living and in good condition, the mother must be in good health or relatively so. The pelvic contraction must not be too great. Below 7 cm. in a flat pelvis and below 7.5 cm. in a generally contracted one it is not safe to induce labor. The consent of the mother and a consultation should always be insisted on. The dangers to the mother, except from sepsis and too great haste in delivery, are not great, and the outlook for the child is better since the incubator has been introduced. The best method is to dilate the cervix by means of rubber bags. It is safe, quick and convenient, provided it is done under proper precautions.

126. **Cancer of Uterus in Pregnancy.**—Johnston thinks that in cases where cancer appears before the fourth month of pregnancy, and is limited to the cervix, the indications are clear; the only consideration must be for the welfare of the mother, and we should act as in case of a non-pregnant uterus. When it appears after the fourth month and is still limited to the cervix, the safety of the mother and child should be the object, but if the disease advances too rapidly the child must be sacrificed. Here the responsibility is most serious. In the third group where, regardless of the stage of pregnancy the disease has extended beyond the cervix and is inoperable the child alone is to be considered. The mother should be carried to term if possible and delivery be performed by Cesarian section. Three cases are reported.

127. **Vaginal Douche.**—Stone insists on the importance of following Emmet's directions, that the douche should be prescribed by the physician only and he should direct the treatment. Sterilization of the syringe should not be overlooked and should be by boiling. Vaginal washes will never cure endometritis.

151. **Technique of Excision of Cervical Superior Ganglion.**—The operation of excision of the superior cervical ganglion for glaucoma has been performed a number of times and the technique is therefore of interest. Ball advises first an incision five inches in length, through the skin and superficial fascia and down to the vertebral column. The spinal accessory nerve is cut and the deep dissection must be done by blunt instruments or fingers. He opens the carotid sheath extensively, and follows the nerve downward to the point where the ganglion is located, and upward if necessary, in case the middle ganglion is absent. If this fails to differentiate the nerve he picks up the nerve separately and irritates it to watch the effect on the heart, so as to avoid dividing the pneumogastric by mistake. After identifying the nerve, the ganglion is separated to the base of the skull; the branches given off are cut and the the ganglion is held taut with the forceps while the operator places his left index finger under it and cuts it at the highest possible point, using strong, curved strabismus scissors. The excision is completed by severing the nerve-strand an inch below the ganglion. The closure of the wound is by superficial sutures.

165. **Smallpox.**—The Osborn treatment for smallpox, which has been previously noticed in THE JOURNAL in the abstract of a paper by Dr. Bibb, Saltillo, Mexico, consists in the external use of strong solution of corrosive sublimate. Stout reports a case in which he used this method with remarkable success. While at first somewhat incredulous of the universal applicability of this method, he has watched and noted all the reports, and has become a convert. The solution is innocuous on the skin, but should be kept from mucous surfaces, the eyes, nose, and throat. Here the spray of peroxid of hydrogen or a saturated solution of boric acid may be used.

FOREIGN.

British Medical Journal, April 7.

Practical Observations on Cancer of Breast. WILLIAM BANKS.—In this third lecture Banks first discusses the parasitic theory of cancer, reviewing the observations of Russell, Soudakewitch, Metchnikoff, Plimmer, Buchanan, Monsarrat, Sanfelice and others, and the impression which he obtained from a study of the subject he notes in substance as follows: 1. There is plainly a structure found in man at the marginal or growing edges of carcinomata. It is not found in other neoplasms except sarcoma. This used to be considered a protozoon, but is now generally thought to be a form of saccharomyces reckoned to be a development stage of certain fungi. Most of the parasites are inside the epithelial cancer cells;

some are outside. How they get there is not known, but it is undoubted that cultivations from these in certain media can be made, and when injected into animals produce a fatal growth containing the same parasites. Sanfelice claims he can produce the same results by injection of blastomyces obtained from a fruit juice, and furthermore that by passing the parasites through a series of animals can produce an adenocarcinoma. And yet there is no clear and indisputable proof of the infectivity of cancer, and rash assertions as to this point can not be justified. On the other hand, the possibility of this infectivity must not be lightly treated in view of the information obtained of late years in regard to this parasite and certain of its properties. The present is not the time for positive assertion, but for careful experimentation and collection of facts. As regards the operative treatment, he claims that in 1877 he advocated a more thorough extirpation of the axillary glands as well as the breast, which was endorsed by Prof. S. W. Gross, in 1880. His views were rejected by Butlin, but Halsted's work has since demonstrated their correctness. He sees, however, nothing new in Halsted's method, excepting what he himself considers superfluous, and sarcastically says that it seems a pity that Halsted did not recommend, while he was about it, the extirpation of the liver and lungs. Banks sees no use in the removal of the pectoral muscles and thinks that when the cancer has reached the supraclavicular glands it is past extirpation. The work of Heidenhain and Stiles is noticed, but he does not think that they have done anything to especially influence the views of men as to eradication of mammary cancer, and it is rather hard that certain surgeons should date the origin of modern operative treatment of cancer from the microscopic researches of Heidenhain and Stiles, and the labors of Halsted and themselves.

The Lancet, April 7.

Remarks on Physical Signs of Pulmonary Disease. P. H. PYE-SMITH.—In these remarks on auscultation and percussion, the author thinks these methods have suffered from over-refinement and too nice distinctions. There is no special "quality" of tone or timbre peculiar to the liver or spleen, the muscles, the heart or the solidified lung. Special terms, such as "Skodaic" resonance, "tympanitic dulness," "flat" or "empty" percussion are undefinable and contradictory or tautologic. The practice of auscultation has suffered even more than has that of percussion, from needless refinements, inaccurate language and vainly descriptive or fanciful metaphoric terms. He discusses the character of breath signs, râles, etc., at length, pointing out where he thinks valid differences exist. He specially notes the musical quality of certain râles as distinguished from others. What he calls nonmusical râles always imply a spongy condition of the lung, whereas râles with tone —consonating or crepitant—always point to solidification of the lung, the only exception being where they are rendered musical by bubbles bursting in a large cavity filled with air. He does not think a râle the sign of pulmonary edema.

The Practitioner (London), April.

Some Remarks on Digitalis Treatment in Chronic Disorders of the Circulation, and Especially on Continuous Use of Digitalis. J. GROEDEL.—Groedel is a strong advocate of digitalis, and reviews the alleged objections to its continuous use. 1. The cumulative effects are due to too large doses or where, when by continuous and somewhat large doses, we seek to produce an effect for which we have to wait longer than usual. He does not consider these usually dangerous, but still they are warnings, especially in cases where the pulse becomes irregular after only small doses, showing the idiosyncrasy. If we watch the diuresis and find it increased, we can have recourse to digitalis administered in small doses without fear of cumulative effects. He emphatically contradicts the charge that the drug causes a rapid decline of strength and wasting of the tissue. Another objection that it produces a tolerance of the drug is only true, he says to a very limited extent. He has no fear of it becoming injurious in this way. The results of experiments by Van der Heiden, as far as we can apply them are not unfavorable to protracted use of digitalis given about once in twenty-four hours. The general indication for its use is in those cases where we can not longer produce the lasting compensation by repose, baths, gymnastics or even a short course of medicine. The special indications are mitral insufficiency, when no contraindications are present such as tension of the blood-vessels, heart disease from overexertion, and slight fatty degeneration resulting from alcohol and tobacco where it may be also curative. In these last cases it is often better to alternate it a week at a time, with some other remedy. In purely nervous disorders of the heart it is useless. In arteriosclerosis it is only of value in the last stage when high vascular tension has passed away, and the same is true as regards disordered circulation is chronic nephritis. He does not advise it in these cases, though he obtained advantage from it in one. In all chronic disorders of the circulation he abstains from it as long as possible, using dietetic and physical means first; it is only when these fail that he resorts to the drug.

Palliative Treatment of Paralysis Agitans. R. T. WILLIAMSON.—While paralysis agitans it not a curable disease, much can be done to palliate its symptoms, and it is important that the patient should lead a quiet life and have as little mental excitement and worry as possible. Alcohol drinks and strong tea and coffee should be avoided, and life in the open air is recommended as far as practicable. Railway journeys and riding often relieve the symptoms for a time. Special stress is laid by Williamson on preventing the patient going about alone in the late stages, especially after walking has become difficult, as fatal accidents are liable to occur. The only drug that he has found to be of real service is hydrobromate of hyoscin, which he gives in doses of 1/75 gr. in 2 drams of chloroform water. It does not stop the tremors, but it diminishes the general restlessness. In beginning its use it is well to be cautious and not give more than from 1/50 to 1/100 gr. and watch its effects as it is increased. Hyoscin is of great service in the sleeplessness which is so troublesome sometimes. Another little point mentioned that the bed should not be too soft as it would increase the difficulty the patient has in turning over in bed to relieve himself from being too long in one position.

Havana Medica, March.

Peptonuria in Yellow Fever. E. EDELMANN.—The renal lesions in yellow fever, according to Edelmann, are invariably the same as in Bright's disease, but the fever and effect of the toxins on the central nervous system materially increase the toxicity of the urine. He has been vainly trying to isolate an alkaloid from this urine resembling the yellow fever toxin by its biochemical properties, but he has succeeded in precipitating all the albumin in the urine. Treated with Millon's reagent, after filtration, a remarkable amount of peptones were precipitated, and he is now studying their biochemic action.

Progreso Medico (Havana), March.

Connection Between Bacillus Icteroides and Yellow Fever. A. AGRAMONTE.—The writer's extensive personal experience and the results of considerable experimental research force the conclusions on him that the agent of yellow fever is still undiscovered, and that new methods of research and new culture-media are necessary for the task. Also that the bacillus icteroides has no more connection with yellow fever than the bacillus coli, which is found in most cultures derived from cadavers. The bacillus icteroides is not found in the blood of yellow fever patients, while it has been found in persons with no indications of the disease. Other arguments against icteroides are its failure to produce specific agglutination and the fact that serum from convalescents from yellow fever does not protect against infection with the bacillus icteroides.

Gazzetta degli Ospedale (Milan), March 25.

"Combined" Method of Hysterectomy. E. TRUZZI.—In his inaugural address, on assuming the chair of gynecology at Padua, left vacant by Inverardi's death, Truzzi proclaimed anew the remarkable success invariably attained with his combined method of hysterectomy. He first opens the abdomen, the patient in the Trendelenburg, and liberates all adhesions between uterus, omentum, appendix and intestines, the uterus held with forceps. The infundibulo-pelvic and round ligaments are then divided between ligatures. The abdomen is then closed, the whole intervention thus far rapid and restricted to isolating the uterus and annexes. The patient is then placed in the

gynecology position and uterus and annexes are removed through the vagina after ligature of the uterine. By this means the adhesions are detached from below upward, a great advantage in freeing the annexes, and pus collections are evacuated downward through the vagina. Another advantage is the impossibility of lacerations of the round and other ligaments.

Sublimate in Treatment of Tuberculosis of Bones and Joints. SILVESTRI.—Three years ago Capparoni urged others to adopt his method of treating surgical tuberculosis with a daily subcutaneous injection of 1 cg. of corrosive sublimate, with which he had been very successful, especially in Pott's disease. Silvestri describes several observations in which the improvement after these injections was so unfailing and so prompt that it must certainly be ascribed to them.

Syphilis Possibly Acquired from Latent Inherited Infection in Another. F. ZAGATO.—An instance is related of a young married couple from distinguished families, both husband and wife of high moral character and apparently perfect physique, an ideal love match in every respect. Two months after marriage coitus, before the menstrual period had quite finished, resulted in a slight excoriation of the penis from which a typical syphiloma developed, followed by the classic syndrome of syphilis, requiring specific treatment for several years before the youth and fine constitution of the man finally conquered it. The most searching investigation failed to disclose the slightest clue for the infection, except a record of possible syphilis in the young woman's father and four abortions preceding her birth. The young husband refrained from intercourse with his wife until completely cured, and she has never shown any signs of syphilis at any time. A child has been born to them since, the picture of health. Is it possible, Zagato queries, that inherited syphilitic infection could have remained latent in the young wife, and becoming exceptionally virulent in the menstrual discharge at one time, have infected the husband?

Annales de Dermatologie (Paris), February and March.

Clinical and Bacteriologic Study of Impetigo. R. SABOURAUD.—In this profusely illustrated article Sabouraud announces that he has succeeded in demonstrating that the impetigo contagiosa of Tilbury Fox is in fact a chronic streptococcus dermatitis, contagious, autoinoculable, the microbe streptococcus constantly found in it from first to last. It is the same affection and the same lesion which may assume an ulcerous form and become ecthyma. Almost all the lesions of the impetigo contagiosa of Tilbury Fox may become secondarily infected with the staphylococcus and suppurate, but this suppurating stage is extrinsic and does not form an integral part of the affection. The staphylococcus aureus flourishing in the streptococcic phlyctenæ may cause, between the lesions of the impetigo, pustulizations exclusively staphylococcic and entirely independent of the streptococcus. As the affection becomes chronic, a period of eczematization and lichenization ensues, in which Sabouraud has traced the streptococcus by means of cultures with ascites serum and neutral bouillon. He states that the discovery of the streptococcus in this affection opens several new chapters in what have hitherto been called amicrobian cutaneous lesions. "Certain affections now classed with chronic eczemas are in reality verified streptococcus dermatites. It is amazing that the streptococcus has escaped discovery so long."

The Eczema Question. L. BROCQ.—This important study is continued through 138 more pages and presents the history of the question in all its phases. Brocq restricts the term eczema to the affection characterized by vesiculation, pronounced and leading to oozing, or aborted, almost exclusively histologic, and terminating merely—from the objective point of view—in the formation of a tiny rounded crust. The redness, desquamation, lichenification, etc., are not essential to the process. He, therefore, refuses the title of eczema to Hebra's prurigo, impetigo and the numerous other affections which Unna has classed as eczemas. The pure objective forms of eczema, he adds, are rare. They are the prototypes, the elementary lesions, and they do not seem to depend on a single, pure pathogenic causes, always the same. Hence results the great difficulty in determining the definite types in eczemas, although a satisfactory compromise may be effected by combining the "etiologic dominant" and the objective form. These are the pure eczemas. The combination of these pure forms constitutes the compound eczemas, and there are besides, the complicated eczemas in which the pure complicates or is complicated by some other dermatosis or dermatoses.

Reflections on Syphilis. C. AUDRY.—The importance of early, prolonged, systematic treatment of syphilis with no regard to the manifestations of the moment, is the conclusion imposed by Audry's conception of the disease. He considers it a relapsing, generalized vascularitis, due to a primary infection of the blood.

Annales de l'Institut Pasteur (Paris), February 25.

Action of Certain Renal Poisons. W. LINDEMANN.—In the course of the experimental research reported from Metschnikoff's laboratory, guinea-pigs were inoculated with an emulsion of rabbit kidneys, killing them in three to five days with symptons of uremia and lesions in the kidneys identical with those produced by true renal poisons. This nephrolytic serum in its action resembles the hemolytic sera Metschnikoff has recently described. Its action is probably due to certain specific substances which are formed in the blood under the influence of the process of absorption of the kidney substance, these evidently affecting the kidney.

Semaine Medicale (Paris), March 21 and 28.

Complicated Varieties of Pneumonia in Children. MARFAN.—Among the complications noted in children are pneumococcus otitis and peritonitis. The effusion with pleurisy is usually purulent under 5 years of age, and is sometimes complicated with suppurative endocarditis, almost always fatal. Pneumonia in children is occasionally accompanied with a rash and subsequent desquamation, resembling the eruption of scarlet fever. It may be initial or tardy but never lasts over forty-eight hours, and appears on the trunk, neck, etc., never on the palms or soles. There may be delirium, convulsions, stiffness of the back of the neck and Kernig's sign, as in an observation he describes in detail, which commenced with the rash, headache, vomiting and extreme agitation. Some writers have described a cerebral pneumonia, eclamptic in children under 30 months and meningitic in those from 2 to 6 years, with coma, and delirium above 6. Delirium in children with pneumonia is chiefly at night and intermittent. This cerebral pneumonia is not so regular in its course as the ordinary variety. It may last longer and the crisis occurs more gradually. It is more serious and, when death ensues, it seems to be due to the nervous accidents. In differentiating pneumonia in these cases it is well to remember that convulsions from a serious intracranial lesion are followed by severe and continuous nervous symptoms, which are absent in the "meningism" of acute disease, especially pneumonia. The torpor in the coma is less pronounced than with actual meningitic or cerebral lesions. The child can usually be aroused by speaking sharply to it. A very high temperature, continuous or subcontinuous, with slight morning remissions, suggests that the cerebral accidents may be due to pneumonia. Lumbar puncture will assist in clearing up the diagnosis and may relieve the patient. Children usually recover from pneumonia. Marfan applies wet cups or leeches to the affected side below the nipple, with fluid foods and drinks in abundance, and a potion of acetate of ammonia. In severe cases he orders a tepid or coolish bath or packs the thorax or trunk for an hour at a time, several times a day, with a napkin wrung out of cold water, covered air-tight. Chloral for eclampsia; brandy for cardiac asthenia, 4 or 5 gms. for each year of the age, very much diluted, is given; in case of necessity, caffein or ether, mustard baths and inhalation of oxygen.

Fleshy Consumptives. G. LEMOINE.—Emaciation is considered one of the chief features of the clinical picture of phthisis, but Lemoine states that tuberculosis developing on an arthritic foundation may progress without causing loss of flesh. The subject appears strong and well, appetite is good; curable consumptives usually belong to this class. The disease presents the same picture in scrofulous as in arthritic patients. The course of the disease is extremely slow and gradual. There is comparative weakness, cough and expectoration, but aside from this, the general health is good and the subjects continue their occupations. Hemorrhages may occur, but they are brief

and the tendency to congestion seems to favor the healing of the tuberculous lesions, which may become encysted and circumscribed. The patient may gain in weight with appropriate hygiene, even in case of quite extensive cavities. They usually at last succumb to a fulminating hemorrhage or some acute secondary pulmonary affection. Others gradually lose their *embonpoint* as the cavities extend, and die emaciated.

Berliner Klinische Wochenschrift, March 12, 19 and 26.

Cause and Treatment of Fissura Ani. O. ROSENBACH.—Persons with a tendency to abnormal conditions of circulation in the abdomen, from nervous or inflammatory causes or irritations in the domain of the sexual organs, are liable to have the excitability or innervation of the bladder and rectal sphincters become abnormal in turn, and if the functions of the bowels are not kept in good order, or the irritating causes removed, accumulations of hard fecal masses, or foreign bodies, grape stones etc., in the rectum may produce an acute or chronic disturbance in its functions, thus setting up a *circulus vitiosus* of motor innervation and circulation anomalies. The most prominent symptom of such a condition is the cramp of the sphincter ani, and the false desires for defecation leading to straining which aggravates the arterial and venous congestion, until all desire for defecation is resisted and a paradoxical innervation results with permanent functional disturbances and painful contraction of the sphincter. The treatment is principally psychic. The circumstances must be explained to the patient as his energetic co-operation is indispensable to accomplish a cure in the simplest way without narcosis or operation. He must control his will, to allow the anus to be touched and allow light massage and dilatation of the sphincter with his own finger, as the dentist's patient resigns himself to the pain of having a tooth filled. Each time the pain is less and he will find that he can insert his finger more and more readily. The manipulations must be thorough and repeated two or three times, at intervals, five or six times during the twenty-four hours. Mild purgatives are given later to keep the bowel functions in good order. After one daily evacuation the desire for defecation must be resisted. Inserting the finger will relieve the desire or prove its justification. Rosenbach some time ago called attention to the psychic benefits of the stomach pump and sound in nervous dyspepsia, and states that this psychic treatment of fissure of the anus has proved remarkably successful in his experience. He gives 1 cg. of morphin in the evening or early morning, in exceptionally painful cases. At this dose it influences favorably the internal tonus of the muscle and promotes defecation.

Tuberculin in Early Diagnosis of Tuberculosis. B. FRAENKEL.—Tuberculin has no affinity for any but tuberculous tissue, Fraenkel observes, and its absolute harmlessness, and the important information derived in dubious cases, renders the tuberculin test a valuable adjunct in diagnosing. It is especially important in differentiating tuberculosis, carcinoma and syphilis, and in "surgical" tuberculosis. Tuberculous glandular affections give a typical local reaction.

Diagnosis and Therapeutic Significance of Tubercle Bacilli and Other Bacteria in Sputa. L. BRIEGER.—"The stomach of a tuberculous subject is his best friend, but his mouth is a traitor, sheltering his deadliest enemies, who may at any moment transform a simple tuberculous lesion into a fatal phthisis." The care of the mouth in tuberculosis, Brieger says, is a most important prophylactic measure that should never be neglected. He attributes the success of creosote, inhalations, ozone and hydrotherapy to their action on the secondary infections, as they have very little effect on the tubercle bacillus. The fever he ascribes to mixed infection; strictly local tuberculosis is afebrile. Hectic fever shows the "streptococcus curve," and this stage of phthisis pulmonalis is a chronic sepsis. The staphylococcus may cause an "aspiration pneumonia." The influenza bacillus fans the flame of the tuberculous process and may induce suppurating inflammation of the still intact portions of the lungs, to which is due the high mortality among the tuberculous in an epidemic of la grippe. This bacillus has also been found snugly ensconced as a harmless saprophyte in open tuberculous cavities where it may vegetate for years, a constant menace to its host and to others. Mixed infection may also remain latent in tuberculous subjects.

Diagnostic and Prognostic Significance of Diazo Reaction in Tuberculosis. M. MICHAELIS.—The importance of the diazo reaction for the prognosis of tuberculosis is emphatically demonstrated by the following statistics of 67 cases tested at the Berlin Charité. Of the patients with negative diazo reaction, 5 were cured; positive, 0. Improved: negative, 44; positive, 15. Unaffected by treatment: negative, 5; positive, 13. Died: negative, 3; positive, 80. Michaelis and Brieger would exclude tuberculous subjects with positive diazo reaction from public sanatoria. Schroeder has also recently stated that two-thirds of all his patients with positive diazo reaction died within three months.

Etiology and Treatment of Ozena. NOEBEL.—In 79 cases out of 111 of typical ozena with the triad of scabs, fetor and atrophy, Noebel was able to establish the existence of an empyema in the frontal sinus in 6; in the antrum of Highmore in 39; in the ethmoidal cells in 10; and in the sphenoidal sinus in 24. The remaining cases were under too brief observation for discovery of the cause, but Noebel considers it beyond all question that by far the largest majority of cases of ozena are due to concealed empyema in an adjacent cavity, and that evacuation is the only treatment. When the cases reach the physician the affection has been of such long standing that the primary cause has hitherto always been systematically overlooked.

Monatschrift f. Prakt. Dermatologie (Hamburg), Jan., Feb. and March.

Staining Elastin and Elacin. F. KRZYSZTALOWICZ.—This essay won the prize offered by Unna last year for the best treatment of the question of the specific character of the staining of elastin and elacin. It states that they take the usual stains alike and can only be differentiated by the Taenzer-Unna stain, which imparts a specific color to each. As the elastic fibers—elastin—become degenerated by age or climatic conditions, into the condition known as elacin, they change from acidophile to basophile. Preparations show very distinctly, treated with a basic stain and then with a solution of tannin and glycerin. In concluding the article states that kollastin is found in large quantities in the upper layers of the skin of young subjects, and seems to diminish with age. Elacin is found in young subjects in large quantities in the upper layers of the skin, and later develops in the lower, without being confined, however, to the papillary layer alone. Basophile collagen is also occasionally noted. The change known as kollacin does not join the rest until an advanced age.

Rapid Cure of Vascular Nevi in Infants. P. G. UNNA.—It is astonishing, Unna states, with what ease these arterial angiomata or venous vascular nevi can be cured with prolonged gradual compression if applied in early infancy. Later it has no effect. He accomplishes this compression by painting the surface with a mixture of 1 part of ichthyol to 9 parts collodion, two or three times a day. The brown pellicle that forms compresses the nevus beneath until the rapidly growing surrounding tissues have caught up with the excessive growth of the angioma or nevus. The ichthyol collodion compression is also a rapid cure for insect bites as mentioned elsewhere.

Banish Linen. P. G. UNNA.—One of the most annoying delusions of the lay mind is that old linen rags, old handkerchiefs, etc., should be used in applying salves, when in fact they are directly counterindicated. They soak up the salve, depriving the wound of all benefit from it, and transfer it to the clothing. Few patients ever apply the salve on cotton, which is much less absorbent of grease, and none ever think of covering the salve on the wound with a piece of woolen or flannel, or with the simplest of all, a piece of oiled silk or rubber tissue. Linen pillow cases and linen caps deprive the scalp of all benefits from the salves applied, and yet mothers will bring their children to the clinic in a linen cap every time. Bathing caps should be used and especially worn at night, as the pillow is a frequent source of renewed infection in scalp diseases. Linen should be completely banished, except possibly in simple hyperemic, edematous, hot cutaneous affections, in which it is found more cooling than other substances. In moist affections the linen soaks up the albumi-

nous serum, dries, sticks and causes new lesions when it is pulled off.

Role of Nervous System in Skin Diseases. LEREDDE.—The pathogenesis of skin diseases has been completely revolutionized during the last twenty years, and the rôle ascribed to the nervous system is becoming more and more restricted. Zona is the only affection in which the arguments in favor of a dependence on the nervous system are convincing. Leredde reviews the history of the various skin diseases and shows that the nervous origin attributed to nearly all at some time, has been dropped for many, and the more we learn in regard to the mechanism of skin diseases, the more difficult it becomes to comprehend any direct action of the nervous system in lesions of the skin, especially those which have a regular course. On the other hand, the action of other causes, microbian alterations, alterations in the blood, etc., are becoming more and more probable, even in diseases in which they can not yet be scientifically demonstrated. The pathogenic rôle of the nervous system must be viewed from a different standpoint than heretofore. The skin is exposed to multiple causes of disease, and we will appreciate their action more and more, as we reject the theory that the nervous system can cause dermatoses. The evidence in favor of "trophoneuroses" and "dermatoneuroses" is far from convincing, and one skin disease after another has proved its independence of the nervous system.

Yolk of Egg as a Vehicle for Salves. P. G. UNNA.—"The remarkable emulsifying properties of the yolk of egg have never been duly appreciated in dermatotherapeutic practice." This emulsifying power is most marked with balsamic substances, tar, ichthyol, etc. It has also another advantage for the treatment of cutaneous affections, as it forms a pellicle as it dries, and the large proportion of sulphur is another point in its favor. Unna recommends for the purpose twenty parts of yolk of egg to thirty parts almond oil, blended as for a salad dressing, and calls the mixture unguentum domesticum. He adds to this, as desired, ichthyol, balsam of Peru, sulphur, camphor, etc. (10 per cent.), sublimate (5 per cent.), etc. "Unguentum domesticum will be found useful."

Muenchener Medicinische Wochenschrift. April 3.

Causes of Climacteric Hemorrhages. A. THEILHABER.—The abnormal behavior of the musculature of the uterus is the cause of the hemorrhage in the great majority of cases, according to Theilhaber. He has noticed that the non-pregnant and non-puerperal uterus is normally moderately contracted. It is usually relaxed during the height of the menses, and the hyperemia and hemorrhage are gradually arrested by the return to its condition of moderate contraction. If the latter is insufficient, the hyperemia continues and the organ may swell, but, with or without the latter, long protracted menorrhagia may follow. In the post-climacteric period the musculature of the uterus becomes atrophied and partially substituted by connective tissue. This atrophy is gradual; the menopause is not a sudden process, and it is usually accompanied by more or less pronounced stenosis of the vessels, so that the bleeding is not excessive even when contraction is insufficient. But if the muscular atrophy sets in before the stenosis of the vessels, the musculature is unable to control the hyperemia and congestion, and menorrhagia follows, sometimes with edema of the organ, and thickening of the walls. The same cause—atony of the uterine muscle—will explain the "essential uterine hemorrhages" in young girls, in whom the musculature has not attained its full development; also in chlorotics, phthisics and convalescents from severe febrile diseases, in whom the musculature is weak. The same explanation applies also to the menorrhagia appearing before the menopause in women with myomata, which have never before interfered with menstruation. The functioning capacity of the uterine musculature is much reduced in a myomatous uterus and, when the rest of the musculature begins to atrophy, the menstrual hyperemia is prolonged, hyperemia of the mucosa follows, and subsequently endometritis fungosa and its accompanying menorrhagia. The excessive hyperemia may also start the myoma to more rapid growth, and as the surrounding tissue atrophies it may become polypous, pedunculated.

Epileptic Equivalents. E. SCHULTZE.—Among the equivalents of epileptic seizures described is a periodical paralysis of the abducens, an impulse to travel, to do immodest acts, a periodical paralysis of the trigeminus, etc. Schultze, in analyzing them and others in literature, has become more and more convinced that epileptic seizures or their equivalents may occur without any disturbance in the consciousness. Donath has also recently described three observations of poriomania or epileptic impulse to wander, which he considers a psychic equivalent of an epileptic seizure.

Embolism of Mesenterial Arteries. OTT.—The symptoms characteristic of this rare occurrence, embolism of the mesenterial arteries, are intestinal hemorrhage, falling temperature, colics, tympanism, evidences of an effusion in the abdominal cavity, embolisms in other vascular regions and palpation of sacs of blood between the sheets of the mesentery. Ott describes two typical cases, one with previous mitral insufficiency, chronic nephritis and emphysema of the lungs. The defective action of the heart suggested a cause for the embolism and a chill, fever, much edema of the lower extremities, and evidences of infarct formation in the lungs, associated with the symptoms above, rendered the diagnosis of embolism of the mesenterial arteries more than probable, and the prompt administration of digitalis and camphor restored the patient to comparative health by raising the arterial pressure and forcing the obstruction along to a less dangerous point, or breaking it up and distributing it to remote vessels. The intestinal hemorrhage in the second case was the almost alarming symptom; fully a quart of blood was lost the first day. The treatment indicated was the reverse of the first: a little sherry was given, ice was applied to the abdomen and the rectum was tamponned, as high as possible, after morphin to arrest peristalsis. Prompt recovery followed. The patient had applied for treatment of hemiplegia when the syndrome of embolism in the mesenterial artery suddenly appeared, although no evidences of embolism elsewhere could be discovered, nor any cause for it.

A Trip Through the Russian Starvation Districts. C. A. LEHMANN.—The writer reports that the Russian peasantry are diseased through and through in the numerous regions he visited: Scorbutus among the starving, and spotted typhus in all classes every year until May, with syphilis, trachoma, tuberculosis and malaria extremely prevalent, and large numbers of cases of dysentery, anemia, abdominal typhus, anthrax, erysipelas, echinococcus of the liver, etc., and epidemics of measles, scarlet fever and diphtheria. The Russian peasant is generally considered robust, but this impression is false and partially due to his endurance: he works till he drops. The peasant huts have been deprived of their thatch to feed the starving animals, and many are roofless, several families gathering into one hut, with domestic animals, all in one room, never aired, lighted with a small window, and "heated black" in the winter, that is, stopping the chimney to keep the smoke in. In the hundreds of huts the writer entered he never failed to find the walls and floor swarming with roaches. In the district of Kasan, the number of cases of scorbutus among the starving was estimated at 20,000. The symptoms differ from the classic picture, although gingivitis, cramps and hemorrhages were usually associated. Sometimes in young subjects the only symptom is a lesion of the gums, which develops until the entire mouth becomes a fetid suppurating cavity. The subjective depression is extreme. Strong men lie groaning, praying for death to end their sufferings. The pulse and thoracic organs seemed normal, but nephritis was frequent. The disease does not seem contagious. Good food promptly effected a cure; without it recurrence was the rule. One of the officials informed Lehmann that nearly every woman has some gynecologic trouble and hysteria, and that the children die off like flies. In these remote districts there is one physician to 32,933 inhabitants on an average. The smallest proportion is one to 13,387; and the largest, one to 69,288. These physicians receive a modest stipend from the authorities, and Lehmann expresses much admiration for their sympathy and devotion and their thorough scientific training, fully abreast with modern ideas. All are well equipped with microscopes and reagents.

Societies.

COMING MEETINGS.

AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., June 5-8.
American Proctologic Society, Washington, D. C., May 2 and 3.
Illinois State Medical Society, Springfield, May 15-17.
American Medico-Psychological Association, Richmond, Va., May 1.
American Association of Anatomists, Washington, D. C., May 1-3.
American Association of Genito-Urinary Surgeons, Washington, D. C., May 1-3.
American Laryngological Association, Washington, D. C., May 1-3.
American Surgical Association, Washington, D. C., May 1-3.
American Association of Physicians, Washington, D. C., May 1-3.
American Climatological Association, Washington, D. C., May 1-3.
American Dermatological Association, Washington, D. C., May 1-3.
American Orthopedic Association, Washington, D. C., May 1-3.
Arizona Medical Association, Prescott, May 2-3.
American Gynecological Association, Washington, D. C., May 4-6.
Medical Society of State of North Carolina, Torboro, May 5.
American Pediatric Association, Washington, D. C., May 7-9.
Ohio State Pediatric Society, Columbus, May 8.
Nebraska State Medical Society, Omaha, May 8-10.
Washington State Medical Society, Spokane, May 8-9.
Oklahoma Territory Medical Society, Oklahoma City, May 9.
Ohio State Medical Society, Columbus, May 9-11.
Kentucky State Medical Society, Georgetown, May 9-11.
Medical Association of State of Missouri, Mexico, May 15-17.
Medical Association of Montana, Butte, May 16.
Iowa State Medical Society, Des Moines, May 16-18.
Arkansas Medical Society, Jonesboro, May 14-16.
Connecticut State Medical Society, New Haven, May 23-24.
Association of Military Surgeons of the United States, New York City, May 31 to June 2.
North Dakota State Medical Society, Grand Forks, May 23-24.
Indiana State Medical Society, Anderson, May 24-25.
New Hampshire Medical Society, Concord, May 31 and June 1.

German Neurologists and Alienists of the Southwest.—The date of this Congress is May 26 and 27, at Baden Baden.

German Otologic Association.—The ninth annual meeting of this Association will be held at Heidelberg, June 1 and 2. For particulars apply to Dr. Siebenmann, Basel, Switzerland.

San Diego County Medical Society.—At the annual meeting of this Society, held recently, the following officers were elected: president, R. L. Doig; vice-president, D. Gochenauer; and secretary and treasurer, T. L. Magee.

Wells County Medical Society.—This Society held a meeting in Bluffton, Ind., April 10. The newly-elected officers are: president, Brose S. Horne, Bluffton; vice-president, L. Mason, Bluffton; secretary, S. A. Shoemaker, Poneto; treasurer, C. L. Blue, Tocsin.

Cumberland District Medical Society.—At the annual meeting, held at Bridgeton, N. J., April 11, the following officers were chosen: president, Frank M. Bateman, Cedarville; vice-president, H. G. Miller, Millville; secretary, J. C. Applegate, Bridgeton; treasurer, Joseph Tomlinson, Bridgeton.

Florida Medical Association.—The annual meeting of this Association for 1900 has just been held at Orlando, Fla., and W. L. Hughlett, of Cocoa, Fla., elected president. The next place of meeting will be Jacksonville, the second Wednesday in April, 1901. The secretary is J. D. Fernandez, Jacksonville.

Tennessee State Medical Society.—The annual session of this Society has just closed, at Knoxville, Tenn. Next year the Society will meet in Nashville. The newly-elected officers are: president, Jere A. Crook, Jackson; vice-president for East Tennessee, B. D. Bosworth, Knoxville; vice-president for Middle Tennessee, R. E. Fort, Nashville; vice-president for West Tennessee, J. Richmond, Memphis; Secretary, W. D. Haggard, Nashville (re-elected); treasurer, W. C. Bilbro, Murfreesboro.

International Congress of Medical Electrology and Radiology.—The following addresses are announced on the official program: "Bois-Reymond's Law," by Dubois of Berne; "General Indications for Galvanization and Faradization," by J. Althaus of London; "General Indications for Franklinization," by A. Tripier; "Electrotherapy and Suggestion," Eulenburg of Berlin; "Franklinization in the Treatment of Dermatoses," Chatzky, Moscow; "Electric Treatment of Neuralgia," Leduc, Nantes; "Electrolysis in Treatment of Uterine Fibromata," F. La Torre of Rome; "Physiologic and Therapeutic Properties of Currents of High Frequency and High Tension," Doumer of Lille; "Electric Syndrome of Facial Paralysis," Wertheim-Salomonson of Amsterdam; "Application of X-Ray in Dermatology," Schiff, Vienna; "Diagnosis of Thoracic Affections with X-Ray," Beclère, and "Physiologic and Therapeutic Properties of Ozone," Labbé. The membership fee, $5, should be sent to Dr. A. Moutier, rue Miromesnil 11, Paris; all other communications to the secretary, Prof. E. Doumer, rue Nicolas-Leblanc 57, Lille, France. The Congress is under the patronage of Benedikt, Erb, Kronecker, Roentgen, De Renzi, Solvay, Tigerstedt and five other well known specialists. (See THE JOURNAL, March 10, p. 620.)

Association of American Medical Colleges.—The next meeting of this Association will be held in the Hotel Shelbourne, in Atlantic City, N. J., June 4, 1900, the Monday preceding the meeting of the AMERICAN MEDICAL ASSOCIATION. The educational session will be opened at 2 p.m., with the following program: 1. The President's Address, by Parks Ritchie, Dean of the University of Minnesota, Minneapolis, Minn. 2. Methods of Clinical Instruction and the Management of Clinics, by Prof. F. C. Hotz, Professor of Ophthalmology in Rush Medical College, Chicago. 3. A Report on the Practical Operation of the Case System in Harvard Medical School during the past year, by W. D. Cannon, Cambridge, Mass. 4. The Library of Pathologic Specimens, by Gustav Fütterer, Chicago. 5. Report by the Committee on Elective Courses in Medical Schools. By John M. Dodson, M.D., Chairman, Chicago. According to the constitution of the Association all amendments to the constitution must be incorporated in the "Call." The following has been submitted by the Milwaukee Medical College, and is herewith presented to the members of the Association, that it may be acted on at the meeting: Amendment to Article 3 (Section 8).—"Colleges members of this Association, to remain in good standing, must not accept from any student a tuition fee less than that advertised by said college in its annual announcement for that year." BAYARD HOLMES, M.D., Secretary.

Chicago Ophthalmological and Otological Society.

March 13, 1900.

Dr. C. D. Wescott in the Chair.

TRAUMATIC CYCLITIS.

DR. WILLIAM A. MANN showed a patient who was hit in the eye by a chip from a block of wood, some five weeks before. The eye was greatly inflamed. Whether the anterior chamber is filled with blood or a blood clot, he could not say. He was inclined to the belief that there might be a dislocation of the lens. Vision is very defective in the injured eye, while in the other it is normal, and there is also normal accommodation. The tension in the injured eye is low. The patient does not complain of much pain, but the eye is very tender.

DR. C. P. PINCKARD said the injury must have been severe to keep the eye so greatly inflamed such a long time. He thought there might be a dislocation of the lens or fundus injury of some kind, although there is no way of determining it.

DR. F. C. HOTZ stated that a blow might cause considerable disturbance in the interior of the eyeball; that probably in this case there might be a dislocated lens, and the intraocular

hemorrhage would fill the whole eyeball. He thought the cornea presented the characteristic streaky condition observed in long-standing cases of traumatic cyclitis. In such conditions absorption of blood takes place very slowly.

DR. W. A. MANN, in closing the discussion, said he believed the man had sustained a serious injury to the eye, consequently the prognosis was bad, but whether the condition would clear up or not, he did not know. The condition of the eye had not changed in the last two or three weeks, although the blood clot was possibly a little lighter in color.

EXTRACTION OF CONGENITALLY DISLOCATED OPAQUE LENSES.

DR. WM. H. WILDER reported a case of this condition.

DIABETIC RETINITIS.

DR. W. H. WILDER presented a woman who came to him six or eight weeks ago, in whom he found some impairment of vision which could not be remedied with glasses. Examination revealed retinitis, which appeared to be diabetic in type. The patient was referred to him by a prominent physician who had made a diagnosis of diabetes. Since then the urine has been examined several times with no evidence of albumin. This is the third case he has seen. In some it is difficult to differentiate it from the ordinary retinitis of chronic Bright's disease. If there are any distinguishing features, it would be that the plaques of degeneration are not so symmetrically arranged around the yellow spots. In this case these plaques are situated in a zone around the optic disc, and there are quite as many to the nasal as to the temporal side, and numerous hemorrhages are present. The plaques of degeneration are usually large and do not present the white glistening appearance that is seen in typical cases of albuminuric retinitis.

DR. O. DODD said he had had the good fortune to see three cases of diabetic retinitis within a few months, two of which were pure diabetes, the other a mixed case. There is considerable dispute as to whether this form of retinitis is caused by nephritic changes, or whether it is due to blood changes on account of diabetes. About four years ago he consulted the literature in regard to this subject and found that there were only forty-six cases recorded of pure diabetic retinitis. The cases which he had seen were very much like the one of Dr. Wilder's in appearance. In one the diabetes had existed for nine years, in the other four, and the combined case of nephritis was one of long standing.

DR. C. P. PINCKARD saw a case of diabetic retinitis last summer in a woman, 65 years of age, who had had diabetes for many years. She had been treated in this country and in Europe with practically no benefit. Two months before he saw her she began to lose vision in one eye. The distribution of the degenerative plaques was somewhat similar to that noticed in Dr. Wilder's patient, that is, they seemed to be apparently more grouped around the nerve than the macula. The hemorrhages were far more abundant in his case and larger. The patient remained in Chicago for only a few months, and during that time no change took place. What ultimately happened he does not know, as the patient returned to the South.

PROFUSE RETROCHOROIDAL HEMORRHAGE AFTER IRIDECTOMY FOR CHRONIC GLAUCOMA.

DR. F. C. HOTZ reported this case. The hemorrhage occurred almost twenty-four hours after a perfectly smooth iridectomy for chronic glaucoma. The tension was only moderately high, the media were perfectly clear, and the opthalmoscopic examination did not reveal any alterations of the vessel walls in the fundus. The hemorrhage was ushered in by the same symptoms as those formidable hemorrhages which sometimes occur after a perfectly normal cataract operation.

The patient, Mrs. W., 63 years of age, anemic and nervous, had gradually lost the sight of her left eye during the preceding two years. One year ago an oculist pronounced her case glaucoma, but for some reason declined to operate, and prescribed daily instillations of eserin. When she first came to Dr. Hotz the pupil was contracted to the size of a pinhole, so as to render an ophthalmoscopic inspection impossible, but the tension was nevertheless decidedly increased. Four days later, Nov. 30, 1898, the pupil was still smaller than that of the right eye, which appeared normal in every respect; but a drop of cocain dilated it within a few minutes, without affecting the tension. There was a shallow anterior chamber, clear media and a typical glaucoma excavation, the margin of the disc showing H. 1 D and the floor of the excavation M. 3 D.; arteries small, veins slightly enlarged, no pulsation; vision reduced to perception of hand. Inasmuch as the sight of the eye was irretrievably lost and the patient had no marked discomfort, he saw no reason for urging an operation, and decided on watching the eye under the moderate and restricted use of eserin.

But when during December and January the patient repeatedly complained of attacks of pain in the eye and left side of the head, accompanied by an appreciable increase of tension, and when he learned from her physician that she was wearing herself out by constantly worrying about her eye, he thought an iridectomy was warranted in order to relieve the tension of the eye as well as the patient's mind. The operation was performed under chloroform at 2 p.m., Jan. 24, 1899; the excision of the iris was smooth and complete; there was no bleeding, and the tension was decidedly reduced. The patient recovered from the anesthetic without nausea, and passed a very comfortable night. During the morning she occasionally felt a darting pain in the eye; at noon she was suddenly taken with the most violent pain in the eye and head, accompanied by a nervous chill, nausea and vomiting. He was at once notified by telephone, and was at the bedside of the patient at 1 p.m. When he removed the bandage he found the lens on the dressing and half the vitreous outside of the wound, and when this was removed the rest of the vitreous was extruded with portions of the retina and choroid and clots of blood. The nausea and headache subsided within two hours, but the bleeding continued for three days. His first thought was to urge the immediate removal of the eye; but both her daughter and physician, fearing the most serious results from the shock such a proposition would have on the patient in her low nervous state, begged him to postpone the enucleation as long as in his judgment it might be done with safety for the other eye. He yielded to their entreaties, and under strict antiseptic dressings and the use of cocain the wound healed, and the blood within the eye was gradually absorbed, so that by the end of February the anterior chamber was clear and the iris plainly visible; the pupil and the coloboma were filled with a fibrinous membrane. The tension, which had been very low, gradually rose to nearly normal, and the tenderness of the eye slowly, but steadily, subsided. Since last May the eye has been free from redness and tenderness, perfectly comfortable, but it is somewhat reduced in size.

He has watched over the other eye with the greatest anxiety, and he is glad to state that up to this time its central vision, its field of vision, and the ophthalmoscope have not shown the least change from the first examination.

DR. C. D. WESCOTT said he had an exact duplicate of the case reported by Dr. Hotz occur in his practice about a year ago. A patient who had consulted Dr. Holmes thirty years ago for traumatism of one eye, in which the sight was practically lost from a serious injury to the cornea, came back because the fellow eye was rapidly failing and had been for a year or more. The man was 72 years of age, of gouty diathesis, and showed general arteriosclerosis, the temporal artery being decidedly hard and firm. In that respect the case differed from that reported by Dr. Hotz. The tension was high, and on dilating the pupil with cocain he found there was beginning cataract and glaucoma. A moderate cupping of the disc could be seen through the clearer portions of the lens, but otherwise there were no changes in the vessels of the fundus to attract particular attention. Iridectomy was advised, with the hope of checking the glaucoma. The man was told that if this operation was successful the cataract would be extracted later, giving him better sight than would be possible in the other eye. Iridectomy was done under cocain and holocain anesthesia. There was practically no hemorrhage attending the operation. The morning following the operation the patient experienced considerable pain, and it was suspected that an atheromatous vessel had broken. On removing the dressing he found the wound distended by the cataractous lens. The lens with its

capsule had come forward and was about one-third external to the wound. The patient was anesthetized with chloroform, and the lens was extracted without the loss of more than two or three minims of vitreous. The eye was dressed. As Dr. Wescott and Dr. Pusey were getting ready to leave the house, their attention was directed to a little stream of blood running from under the dressing down the temple. The dressing was removed, and it was found that the vitreous had practically escaped with some blood still flowing. The eye was in a condition for immediate enucleation. It was not thought best to give the patient chloroform again so quickly. The patient was asked to consider the operation and declined any further interference. The eye healed after some time, with moderate reaction, and perhaps two months after the accident Dr. Wescott saw him, when the eye was practically quiet.

DR. J. E. COLBURN said that in 1885-6 he had a glaucomatous pair of eyes to deal with. He operated on the right eye without accident, and secured a very good result. Some four weeks afterward he operated on the left eye, and on account of a little nervousness on the part of the patient he dragged the iris out a little farther than he intended, but aside from that the iridectomy was smooth. At the end of the third day the patient complained of severe pain, and he was sent for. He opened the dressing and found the lens in the anterior chamber; there had been extensive hemorrhage and the dressing was saturated with blood. A portion of the remains of the iris protruded with the hemorrhage, it having been forced down by the partially dislocated lens. Without any difficulty he removed the lens with his fingers, closed the wound, and the blood was absorbed. Four or five weeks later he snipped off a bit of iris which was protruding from the wound. He saw the patient about three years ago and the eye had not given any trouble from the time of the operation. The eye he operated on first was in good condition; the vision had materially improved, and there had been no return of the glaucomatous condition. This was eight or ten years after the first operation. He thought he would have to enucleate the eye in this case. There was perception of light in it, with rather opaque lacework crossing the artificial pupil; the iris was drawn somewhat downward, and as near as he could determine the blood clot had been entirely absorbed, leaving only little filaments of lacework in the opening.

In 1892 he operated on an old woman for cataract. The first eye gave him a very easy operation. In the second, which looked rather suspicious at the time of the operation on the first eye, he advised the removal of the lens, because it was hypermature and beginning to give disturbance. He removed the lens and during the night following the operation the contents of the eye was expelled. He thought it was much safer out than in because it was only a question of time when the eye would have given trouble anyway. He enucleated the eye in this case the morning following the operation.

DR. F. C. HOTZ says he had always considered an iridectomy in a case of chronic glaucoma as a comparatively easy operation, one which would not ordinarily give any trouble, but after hearing of accidents in such cases as had been reported, he thought differently. In the case reported by Dr. Colburn, the hemorrhage must have commenced in the anterior part of the choroid so as to crowd into the vitreous and the smaller vessels. But in the cases of Dr. Wescott and himself it must have been a good-sized vessel, rupturing with such force as to press the whole vitreous forward. He did not know whether the cases of Dr. Colburn were acute or chronic.

DR. COLBURN replied that they were chronic.

DR. HOTZ said that stress should be laid on the acute cases because in them hemorrhages were more likely to occur on account of the vessels being more engorged than in the slowly proceeding chronic ones. In his case he was told by the daughter of the patient that there were unmistakable signs of hemophilia in the family, although this could not be elicited in the history of the mother.

DR. H. M. STARKEY mentioned a case of chronic glaucoma that he had had under observation for several years, the patient having been seen by Dr. Mann with him. He found that spontaneous rupture of the eyeball with escape of the contents had taken place. The patient bled profusely. She had suffered terrific pain before the eyeball ruptured. The spontaneous hemorrhage occurred in the degenerated eye without any accident or without any violent exercise.

DR. C. P. PINCKARD asked whether the rupture occurred at a right angle to the sclerocorneal margin, or whether it was concentric with the cornea.

DR. W. A. MANN said it occurred along the border of the iris in a concentric direction.

DR. C. P. PINCKARD reported a similar case of spontaneous rupture, saying that the night nurse was awakened by a scream from one of the wards; she went to see the patient, an old woman with chronic glaucoma, and found that spontaneous hemorrhage had taken place, the rupture having occurred near the sclerocorneal junction. It was not concentric, as one might expect it to be, but at a nearly right angle to the corneal margin. The Doctor enucleated the eye the next day.

THE INVENTION OF THE ALUMINUM BALL.

DR. H. F. COLEMAN reported the following case:

About a year ago, Dr. Paul Walter called to ask my advice in regard to Mule's operation. I remarked that my experience was adverse to it, but if he wished to try the insertion of a ball, I would suggest that a perforated aluminum one be used, and it might be more safely inserted in Tenon's capsule than in the sclera. Some three months later the Doctor again called and reported that on May 15, last, he removed from Mrs. C., the left eye, which had been destroyed two years previously by an accident and had since continued to suppurate.

The conjunctiva was dissected back, the muscles picked up and ligated and the eye enucleated. This was followed by irrigation with one gallon of sublimate solution, 1-4000. An aluminum perforated ball that had been carefully disinfected was placed in Tenon's capsule, and the muscles, then the conjunctivæ were brought forward over the ball and stitched. Boric acid and formalin dressings were applied. Healing rapidly followed and was attended by very little reaction. Five weeks later a slight purulent discharge appeared. On examination the aluminum ball was found corroded, half of it having disintegrated, and it appeared like soft mud. The other half was much corroded. The remains of the ball were so adherent that in order to remove it, it was necessary to use the curette. By the use of disinfectants the eye healed in a few days, but during that time the patient suffered a good deal.

CYSTOID CICATRIZATION FOLLOWING CATARACT EXTRACTION, WITH PERIODICAL ESCAPE OF AQUEOUS.

DR. ALBERT E. BULSON, JR., Ft. Wayne, Ind., reported the following case:

Mr. H., aged 66 years, in excellent health, with mature senile cataract in the left eye, presented himself on Sept. 5, 1899, and five days later was operated on at Hope Hospital, linear extraction being performed. The operation was without incident, no hemorrhage of any consequence following the iridectomy, the lens being easily removed and apparently no cortical substance remaining. The usual precautions were observed in looking for possible tags of iris, pieces of capsule, clots of blood, and beads of vitreous that might be present between the lips of the wound to prevent proper healing, and with the usual aseptic dressing, consisting of a gauze pad and bandage over both eyes the patient was put to bed in what was considered first-class condition.

The dressings were not disturbed for thirty-six hours, and the eye not inspected for seventy-two after the operation, when it was found that the wound had not completely closed and aqueous was escaping through a small opening near the center of the original wound. Except for the delayed union of the wound there were no untoward symptoms and the dressings were reapplied, with quite firm pressure, and maintained for a period of three days, at the end of which time inspection showed that the wound had apparently closed.

Ten days after the operation the patient was allowed to have the eye uncovered, though wearing a moderately smoked glass for protection from bright light. At this time there was no evidence of inflammation and the wound gave every indication of having closed properly.

Nearly four weeks after the operation I was asked to visit the patient and make an examination of the eye, the report being that "something had happened." Inspection of the eye disclosed a partially collapsed cornea, with escape of aqueous through a minute opening near the center of the site of the wound made for extraction of the lens. There was no assignable cause for the accident, nor could I obtain a history of trauma. Examination with a magnifying glass disclosed no prolapse of iris or capsule.

The wound was carefully touched with tincture of iodin and a pressure bandage applied. At the end of three days, when the bandage was removed, the wound appeared perfectly closed. Four weeks later, or a little over two months after the original operation, there being no contraindication, glasses were adjusted and vision 20/40 obtained with +9D = C +2D. axis 10°.

The patient then resumed his avocation, that of "night man" at the office of an omnibus and hack line, and experienced no inconvenience nor discomfort pertaining to the eye until three months later when he reported that, while rubbing his eye something had "broken," allowing nearly a teaspoonful of clear liquid to run from the eye. Inspection of the eye disclosed a small fistulous opening at the site of the former fistulous opening, with aqueous escaping on the slightest pressure on the cornea. As on previous occasions, nothing could be seen protruding in the wound, though it was suspected that a remnant of capsule was probably responsible for the imperfect closure of the wound.

The lips of the wound were thoroughly rubbed with pure ichthyol and a pressure bandage applied. At the end of five days the fistulous opening appeared perfectly closed, and there being no evidence of inflammation or irritation the patient was allowed to resume regular work, but with due admonition regarding the liability of recurrence of trouble in consequence of trauma. From that time until this no indication of return of the trouble has put in an appearance, the eye is free from inflammation or irritation, and a test of the vision a few days ago showed that 20/40 is still maintained.

The interesting feature of the case is the fact that the fistulous opening has to all appearances perfectly closed on three occasions, and remained so for a considerable length of time, only to burst open later. There has been no marked ectatic condition of the conjunctiva, nor could increase of intraocular tension be detected at any time either before or after the operation. There had at no time been any evidence of inflammation such as would likely occur if a tag of iris had been imprisoned in the wound, and very fortunately there has been no septic infection of the wound, though there has been ample opportunity for such a complication. The question of recurrence of the trouble is one that time alone will settle, but if present indications may be judged the fistula is securely closed.

Omaha Medical Society.

TUBERCULAR MENINGITIS.

DR. H. M. MCCLANAHAN discussed this topic from the medical side, and said that the first point of importance is that of a correct diagnosis, which is by no means easy. Many diseases simulate this one. Ordinary meningitis has a high temperature with marked symptoms, seen early and of rapid growth. In this form the conjunctival reflex is lost early; the secretion of the Meibomian glands is always profuse and the lids are glued together; the mental conditions are quite different and sudden in their access; the delirium is more active. The usual disease diagnosed improperly is typhoid fever; here the blood count and leucocytosis should assist in differentiating one from the other. Malarial fever can be eliminated by the use of quinin.

The prodromes of tubercular meningitis are very interesting and characteristic; they are always slow and of many days' duration, often thirty or forty; one of the early symptoms is a change in the mental state; the patient is peevish, irritable, dislikes are more pronounced, headache is complained of and becomes more and more severe, constipation is seen early and is permanent and can not be relieved; gastric crises often occur. The fact that you can secure no amelioration of the symptoms in general is, of itself, a means of diagnosis. The secondary symptoms are due to pressure. Somnolence goes on to stupor, spinal rigidity becomes a constant symptom, the tache cerebral is present but is not pathognomonic, the red line persists after the finger is drawn over the surface, and convulsions may occur if the patient is quite young.

As a rule, the disease is a secondary one, the focus being found in the bronchial glands.

Since the disease is an incurable one, he can not understand why the surgeons do not operate when called in. They agree in the diagnosis, wish something might be done, but are too loath to operate. Twenty-three years ago, the great Gross humorously said: "I suppose we shall some day see specialists for the vermiform appendix." We now have them, and Dr. McClanahan hopes to see the day when the surgeon-specialists will operate and learn to save some of these patients with tubercular meningitis. We now save those with tubercular peritonitis, by operation, while, a short time ago, it was considered a hopeless condition. He thinks we should seek out the primary focus and operate boldly.

DR. A. F. JONAS discussed the question from the standpoint of the surgeon. He said that he had thoroughly gone over the last twenty years of the *Annals of Surgery* and the *Am. Jour. of the Medical Sciences*, and found no reports of successes in the surgical treatment of this disease. Trephining has been done since 1800, for relief, but all results have been poor. There was slight revival on the advent of antiseptic surgery, but with little or no improvement. All operators speak of brain surgery in general as discouraging; the operations are not hard, but brain tissue regenerates slowly and imperfectly. If a functional center is involved, function is permanently lost. Linear craniectomy is a thing of the past. Tubercular meningitis is usually secondary to tuberculosis of the lungs, vertebræ, joints or the peritoneum. It is rarely primary. The ventricles are distended; the sutures enlarged in the young;. the miliary tubercles are usually found at the base, on the under side of the cerebellum; along the course of the circle of Willis, near the vessels. The exudate may be either serous or purulent, and is of moderate quantity. Sometimes the convexity of the brain is involved, which is indicative of a mixed infection. At times, the tubercles are small, while the exudate is large; in other cases, the reverse of this is true.

The patients are usually found to have been peevish at first. He feels that this is one of the most serious of diseases. It is an error to think that if the patient recovers, we have made an error in diagnosis. Tubercular meningitis, properly diagnosed, the diagnosis proved by lumbar puncture showing tubercular bacilli, has been followed by recovery. Tubercular disease can be of mild form in brain lesions as well as elsewhere. Lumbar puncture is the only method of relieving intercranial pressure; it is, however, only temporary and only useful for diagnostic purposes. We can not open the abdomen with the same degree of success as we can the abdominal cavity. The serum treatment seems to offer more hope for the future than any other. Surgeons do not like to operate in cases known to be hopeless. Surgery is unjustified in this class, according to our present knowledge. Irrigation is very ineffective, or entirely so, and this is also true of the use of iodoform emulsion. Of lumbar punctures, 80 per cent. have shown the tubercle bacilli, and yet the puncture was of no therapeutic value. The very nature of the exudate found shows the hopelessness of operative procedures. It is to be hoped that the future of operative work may be brighter, just as it has been in general surgery, even though the methods are very radical. The prognosis is not entirely hopeless; there is a long list of recoveries.

DR. C. C. ALLISON said that the medical men had been the pioneers in the treatment of tubercular meningitis and, having met with no success, were perfectly willing to make the surgeons a present of their cases. He was not sure that the surgeons would accept the gift. The analogy between the surgical treatment of tubercular peritonitis and meningitis

will not hold. In the one, we flush and drain, and meet with fair success; in the other, there is a much smaller surface capable of being reached. Flushing and drainage are, of necessity, much less thorough. He had operated on one patient who had a typical case excepting the lack of the proof of the bacillus; much improvement took place but the child died some months later.

DR. W. O. HENRY said that tuberculin ought to be used as a means of diagnosis, just as it is in cattle. Since operative measures are only of use in tubercular peritonitis, which is primary in character, analogy will teach us that they will only be effective in those minority cases of tubercular meningitis which are primary.

DR. W. R. LAVENDER said that, as regards the differential diagnosis, it must be borne in mind that there are two varieties, the circumscribed and the general. The former often shows nothing macroscopically and very little microscopically; at the same time, it is very fatal. The general variety manifests itself in the pia mater and fissure of Sylvius. The vessels are soft, infiltrated, and thrombi are present; the lateral ventricles show soft masses and there is no obstruction to the flow of fluid in the spinal canal. This is just the opposite of the condition found in ordinary meningitis, in which there is obstruction to the flow of spinal fluid. Typhoid fever is so often the diagnosis erroneously made that we must always remember that in the fever we have a higher temperature; a slight irritability or none whatever of the patient; a dorsal decubitus; that the patient does not attempt to cover himself with the bed-clothes if they are pulled down; that we have tympanites and, later, an eruption. In gastro-enteritis, the vomiting is not the explosive, persistent form which we see in the brain lesion.

The blood in tubercular meningitis shows a slight increase of leucocytes filled with vacuoles; active ameboid movements; the red blood-corpuscles are of normal shape and tend to agglutinate; pigment is found among them; lumbar puncture, best made at the margin of the third lumbar vertebra, is the best possible method for differential diagnosis; the cover-slips may show the bacilli; if they are not seen here, inoculation of guinea-pigs or rabbits will develop them if present. This is the best test for them.

DR. J. E. SUMMERS, JR., said that in his experience this disease is not always an acute one. It is usually secondary and often without prominent symptoms. The glands along the jugular vein are often involved. The head mirror may show pus in the Eustachian tubes. Middle-ear trouble is often responsible for it. He has never operated in hopeless cases, but feels that it might with propriety be done. He recalled that Gross reported, in 1883, eleven operations with recovery in 25 per cent.

Cleveland Medical Society.

Quarterly Meeting, March 26, 1900.

Presiding Officer—Dr. J. B. McGee, vice-president.

APPENDICITIS.

DR. ROBERT T. MORRIS, of New York, addressed the Society on this topic. He said that if we were able to find a small focus of infection in every case of typhoid, or pneumonia, or scarlet fever, and if it could be readily recognized and removed there would be no discussion in regard to the advisability of removing it in order to save an individual from the suffering entailed by the disease. As appendicitis is such a disease, he thinks no one should be allowed to die from it without recourse to operation. He estimates that approximately 200,000 cases of appendicitis occur every year in the United States. The cause of infective appendicitis is anything that produces a break in the cells of the mucosa. This may be a concretion, or a sudden twist of the appendix, or the desquamation of the epithelium such as occurs in typhoid fever, in colitis or catarrhal infection of the intestinal mucosa. As soon as the mucosa swells there occurs an anemia due to compression of the blood-vessels, in consequence of which the leucocytes are able to reach the site of infection and combat it. After the attack the site of the ulceration contracts and closes the lumen of the appendix, thereby insuring further attacks of the disease. Behind this structure mucous inclusion occurs in nearly 80 per cent. of cases, while in about 12 per cent there are concretions.

In making the diagnosis few points need to be remembered, and the chief dependence should be placed on palpation. Rigidity of the abdominal muscles is a significant sign. As the progress of the infection can be promptly stopped by proper operation, it should be done as soon as the diagnosis is made. This reduces the death-rate, the suffering-rate and the loss-of-time-rate. In operating, a short incision is sufficient, no matter whether there are adhesions or not, so long as there is no pus inside the appendix, but every surgeon should make the incision as long as he needs for his best work. He advocates using hydrogen peroxid to blow out the pus. In treating cases of general septic peritonitis the indications are to remove the chief toxin-bearing fluid by washing out the pus from the pelvis through small incisions, washing out the cavity with several gallons of hot saline solution and then giving an intravenous injection of three or four pints of the same solution. He des not believe in the use of gauze packing or in handling the intestines. He noted that iodoform poisoning frequently occurs from the use of iodoform gauze in the abdominal cavity, and that it then passes for septicemia. In the latter condition, however, the wound does not look clean as it does in iodoform poisoning.

DR. HUNTER ROBB said that in probably one-fifth of all cases of pelvic disease on which he had operated he had removed the appendix for associated disease of that organ. He had often found that in these cases where the appendix is extremely adherent to the surrounding structures no histologic change could be found in the structure of the organ. He had therefore concluded that some degree of appendicitis might arise apparently without infection of the lining epithelium. His own experience in operative work led him to indorse the opinion of Dr. Morris as to the disadvantage of using gauze drainage. In a series of twenty-nine consecutive cases in which there has been pus in the abdominal cavity, every case recovered, although drainage was not employed in a single case in any form. One explanation is that he found this pus free from bacteria.

DR. L. B. TUCKERMAN asked what the essayist did with the multiple openings made for general peritonitis, as to whether he closed them all or whether any were left open for subsequent drainage.

DR. O. B. CAMPBELL asked whether the large majority of the successful series reported by the essayist would not also have recovered under medical treatment.

DR. C. B. PARKER emphasized the importance of the non-use of drainage in abdominal operations. For some time the only drainage that he has employed has been the ends of the ligatures used in closing the incision, thoroughly sterilized and twisted into a bundle and introduced into a small opening left in the incision.

DR. A. F. HOUSE asked the essayist how he dealt with abscesses of which one wall was formed by the omentum and the other by the parietal peritoneum.

DR. W. H. HUMISTON said that he is a believer in early operations in these cases, as many of them survive after a first attack only to have a second or third, during which there is much suffering and loss of time and increasing danger. He noted the fact that some years previously conditions at the City Hospital had compelled him to abandon drainage in pus cases previous to the publication of the article by Dr. Clark in which this practice was advocated.

DR. F. E. BUNTS said that he had give up the use of hydrogen peroxid because he found that after it had been employed it was nearly always possible to find some pus remaining. He is inclined to think that a pus cavity can best be treated by mopping it out with dry gauze and then washing it out with normal saline solution. He has noted that while it seemed better not to employ gauze drainage it was hardly true that collapse was avoided simply by placing gauze in the abdominal cavity. He thought that many of the serious symptoms following the introduction of gauze were due to the fact that the pus in the abdomen contained streptococci.

DR. N. STONE SCOTT asked what method the essayist employed in the management of bad cases of appendicitis which were

seen from a third to the tenth day of the attack. He also asked as to his experience with the frequency of chronic appendicitis and as to his treatment of the stump of the appendix.

DR. H. J. LEE said that, speaking as a general practitioner and after considerable experience, he was a firm believer in operating on every patient with appendicitis, when the diagnosis was made. He had seen three who were not operated on, in whom a subsequent attack occurred under conditions where an operation was impossible and the attacks resulted fatally. He asked Dr. Morris if he had observed, in cases of appendicitis, that pressure on the left side of the abdomen frequently caused pain on the affected side.

DR. A. B. WALKER, of Canton, asked whether or not all cases of streptococcus infection are fatal, and what the essayist's experience had been with the use of antistreptococcus serum.

DR. ROBERT T. MORRIS, in closing, said that appendicitis does occur by infection from the peritoneal side, but that in such cases it is only the slowly progressing disease. He has found the pus sterile in many cases, in others the colon bacillus, streptococci, sometimes staphylococci and in one case a pure culture of staphylococcus albus. In certain ones he employed a drain consisting of a small piece of wick, instead of the gauze packing. In the multiple openings for general septic peritonitis he usually closes them all but the one opening into the pelvis, in which he used a wick drain. While many of his serious ones would have recovered without operation, statistics show that in such cases the first attack is fatal in 10 per cent., and subsequent attacks in 15 per cent. In addition to greatly reducing this death-rate, there is a great saving of time, suffering and anxiety. He said he used the hydrogen peroxid for its mechanical effect in blowing the pus out of the abdominal cavity, and that it left the cavity cleaner than he could leave it with any sponge. In answer to Dr. Scott, he said that he would operate in such cases without waiting for a safe interval, and the word "safe" in these cases is meant to apply to the surgeon's reputation and not to the welfare of the patient. He said that when he spoke of appendicitis he referred essentially to infective appendicitis.

In treating the stump he inverts it in all cases in which it is possible, and when the tissues are fragile, he endeavors to bring the cecum nearer the surface and suture it there, so that in case a second perforation occurs it will escape externally. He advocates allowing the patient to decide as to whether an operation should be done or not.

Philadelphia Pathological Society.

March 23, 1900.

President, Dr. F. A. Packard.

HEMORRHAGIC PANCREATITIS.

DR. J. A. SCOTT presented specimens from a case of this in a man 50 years of age, who had presented symptoms of intestinal obstruction. His personal history was good, and he was not addicted to alcohol. Three days previous to entry into the Pennsylvania Hospital, he began to vomit and later suffered from pain in the epigastric region, referred to the left iliac fossa. There was general abdominal tenderness, but no jaundice. An exploratory incision was made, but death occurred. On opening the abdomen the omentum was found studded with areas of fat necrosis, a condition nearly always found in hemorrhagic pancreatitis. In these areas fat droplets and fat crystals were found microscopically. The gland was swollen to about three times its natural size, and its head looked grayish. In the areas not affected by the recent hemorrhages there were evidences of old hemorrhagic foci. An interesting feature was the appearance of the blood-vessels—the endothelium showing evidences of marked proliferation. The kidney was swollen and pale. Cultures were made and showed colon bacilli present.

DR. SIMON FLEXNER stated that the specimen presented very much resembled the condition produced in cases of experimental pancreatitis but the vascular changes were different. In the case presented the blood-vessels resembled those found in tubercular meningitis. In these cases it might be an interesting point to know whether or not the agent which produced the inflammatory change was the one which brought about the hemorrhage.

SARCOMA OF MEDIASTINUM.

DR. J. A. SCOTT also exhibited a specimen of sarcoma of the anterior mediastinum from a woman 32 years old, in whom the tumor first made its appearance shortly after confinement. Later there was great pallor, cough, distended veins of the neck, and effusion in the pleural cavities. The heart was not displaced. The glands of the axilla were enlarged, but there was no enlargement of the inguinal ones. The lower extremities were not edematous, but emaciated. The blood examination showed: red cells, 5,400,000; leucocytes, 38,000; hemoglobin, 69 per cent. Death occurred suddenly. Post-mortem showed the spleen enlarged and a large amount of abdominal fluid. The tumor was divided into two lobes, and had extended into the lung substance. It was found that the superior vena cava had been compressed just before its entrance into the auricle. The liver was enlarged, and showed a nutmeg appearance. On microscopic examination the growth proved to be a lymphosarcoma. Many multinuclear cells were found in the tumor.

HEMORRHAGE INTO THE PONS.

DRS. W. S. WADSWORTH AND WM. G. SPILLER presented a specimen of this condition, from a man aged 50. Death occurred about one-half hour after the hemorrhage. As to symptoms, the face was cyanotic and the pupils contracted. The respiratory failure caused death. It has been found that in these cases the hemorrhage has a tendency to occupy the median line of the pons. There had been no hemorrhage into the ventricles.

DR. A. A. ESHNER expressed the opinion that hemorrhage into the pons is of more common occurrence than recognized. Last year he found two such cases, and shortly afterward Dr. F. A. Packard showed specimens.

TUBERCULOSIS OF THE SKIN.

DR. JAY F. SCHAMBERG reported a case of tuberculosis of the skin of the hand, resulting from accidental inoculation. The case was one in which a physician had a year previously treated two patients for tuberculosis of the throat, and it is supposed inoculation of the hand occurred in making the applications. A scratch at first occurred and a small tumor developed on the knuckle, which afterward underwent necrosis in certain areas—the size of pinpoints. The tumor was excised and, on microscopic examination, showed giant cells, and hyperplastic areas. No tubercle bacilli were found. Small particles of the tumor were inoculated into the abdominal region of guinea-pigs. One of them died on the 116th day, and tuberculous nodules were found in the lymphatic glands. The second one was killed on the 118th day, and at the site of the wound a cold abscess was found. There were other areas showing evidences of tuberculous invasion.

American Laryngological, Rhinological and Otological Society.

Southern Section, Louisville, Ky., March 30, 1900.

(Concluded from p. 1003.)

ACUTE THYROIDITIS.

DR. D. B. KYLE, Philadelphia, presented a paper with this title. He had seen two cases within two weeks, the only ones he had ever seen, and in reviewing the literature of this trouble emphasized the rarity of this condition. There are two forms, suppurative and simple. The latter is more common in females between 20 and 30 years of age, with sudden onset, vague pains in the neck, swelling of the thyroid to the size of a hen's egg; marked fever; the swelling and fever begin to abate in three or four days. The suppurative form occurs in septic diseases, has a characteristic fever and general symptoms and local signs of suppuration. There is often an infection of bacterial origin, but most frequently the causal factor has not been located.

Two cases were reported, with recovery in both. The treatment was the administration of calomel for several days, salines, and cold continuously with ten minutes' intermission each half hour, and stimulating nourishment.

DEATH FOLLOWING OPERATION FOR NASAL SYNECHIAE.

DR. J. A. WHITE, Richmond, Va., reported a case of death in four days following a simple operation for nasal synechiæ, and inquired whether it was a sequence or coincidence. The case

was that of a young man presenting himself on December 8, with symptoms of constant headache, nasal obstruction and hyperopic astigmatism. Dr. White first corrected the astigmatism and then broke up the adhesions of the deflected septum. After a few days the headache returned but was less severe and there was still some nasal obstruction. A little chromic acid was then used. On the 23d he was looking very bad, but nothing out of the ordinary was found. The temperature was 103.6, but under quinin it came down readily. The next day he was found unconscious, having been sitting in the same place for sixteen hours. The temperature was 101, pulse 90, slight contraction of the tendons of the left hand, no eye symptoms. All efforts to arouse him failed. Eight ounces of urine were drawn and found to be almost solid albumin. Dr. White at once thought of meningitis and of uremic poisoning; as to the former, he had never heard of a case of nasal traumatism or inflammation of the ethmoid cells or frontal sinuses non-purulent in character the cause of meningitis. He did not think it could have been a thrombosis, and was inclined to the belief that death was due to nephritis. He thought the rapidity of the man's death precluded meningitis. No autopsy was permitted. Dr. White admitted that simple operations on the nose are very often followed by consequences out of all proportions to the traumatism, but did not believe that this was the cause of death.

DR. D. B. KYLE, Philadelphia, thought Dr. White was right in ascribing death to kidney lesion; it was either that or thrombosis.

DR. L. B. GRADDY agreed that it must have been a case of advanced albuminuria.

DR. N. H. PIERCE expressed himself confident that it was a case of chronic nephritis. He called attention to the apparent intimate connection between albuminuria and nasal operations, mentioning the case of a young man, meeting with a nasal traumatism, who developed a serious condition of albuminuria, yet whose urine had been examined for life insurance three days before the accident. He reported another case where the application of chromic acid increased the albumin to an alarming extent.

DR. WM. CHEATHAM did not think Dr. White's operation had anything to do with the death of the patient. He emphasized the occurrence of serious symptoms occasionally from the most trivial operation on the nose, illustrating by the case of a patient who rapidly developed erysipelas after a trifling operation. He does not believe in predisposition playing a part in these troubles, and said that the only predisposition he believes in is an abrasion of the nose.

DR. J. A. WHITE, closing the discussion, expressed disappointment at not receiving more information regarding the relation of the operation to meningitis. He was anxious to know whether it would be possible for meningitis to have developed in such a short time without previous suppuration in the nose. He was fully aware of the dangers following nasal operations, and said that it is his invariable rule to take the temperature the next day. He has seen violent attacks of tonsillitis follow within twenty-four hours, but has never been able to determine the connection between the two. He thought the case of erysipelas reported by Dr. Cheatham came too quickly to have been due to the operation, yet he had seen cases where there seemed to be connection.

NASAL ANGIOMA.

DR. T. V. FITZPATRICK, Cincinnati, Ohio, presented a paper on this subject. He reported the case of a woman, 20 years of age, with no nasal injury nor disease. There had been hemorrhages for six months; not much obstruction to respiration; pulsation in the nose. The tumor was attached to the inferior turbinate, with a slough on its anterior surface. The case was reported, as the literature on the subject showed true angiomata to be rare.

DR. D. B. KYLE stated he believed these tumors to be a dilatation of the original blood-vessels. The tumor referred to in literature is a mixed tumor spoken of as a fibroangioma or other combination. If it is a true blood-vessel tumor it is not a new growth; it is benign.

DR. N. H. PIERCE said one is apt to confound these growths with those on the vascular turbinates. He referred to two patients in whom there was recurrent hemorrhage; in one the tumor was the size of a pin, the other of a pea.

ANGIOFIBROMA OF NOSE AND PHARYNX.

DR. M. F. COOMES, Louisville, presented a clinical case. When first seen the patient was exsanguine, a mass protruded from the mouth and nose, a piece hung in the larynx, interfering with the breathing, and the tongue was concave to accommodate the growth in his mouth. The greater part of the mass that could be reached was removed piecemeal, by snaring, cutting and ligating. A Jarvis snare was pushed back on the growth, tightly applied and left on from sixty to 120 hours, then punctured and removed. The patient recovered, but still has a large mass showing externally.

NASAL HEMORRHAGE.

DR. T. V. FITZPATRICK, Cincinnati, Ohio, reported a case of persistent nasal hemorrhage. It followed the removal of a hypertrophied turbinate on the right side by the galvanocautery. It is his custom to always ask a patient, before a cutting operation, if he has been a bleeder, and this one had stated that he bled freely ten years before, but not since that time. Two days after the operation he was found to be bleeding profusely, almost exsanguinated. It was controlled by a gauze packing, but after the second one the bleeding occurred around it, due he believed to a subsidence of the swelling of the vessels, a consequent loosening of the packing and bleeding. A general pulsation all over the body was felt before each attack of hemorrhage. This vasomotor disturbance was seen to precede each hemorrhage. A hypodermic injection of ergotin, given by the nurse caused dizziness, faintness and convulsive body movements lasting fifteen minutes Thirty-grain doses of bromid of sodium were given, with a disappearance of the vasomotor disturbances and bleeding, and the packing removed without recurrence.

LARYNGEAL VERTIGO.

DR. J. A. WHITE, Richmond, Va., reported two cases of uncertain diagnosis. One was a man, 45 years of age, who contracted whooping-cough, but was apparently well of it for 2½ months when this peculiar condition developed. After attacks of coughing he would have a period of unconsciousness, whether standing or sitting. The Doctor was consulted because of an injury received by a fall following a spell of coughing. At the end of a coughing spell his head would swim, with a sensation of choking and a flushing of the face present. His diagnosis was laryngeal vertigo. He found nothing that did any good. In a succession of these cases what would do one good would fail in another.

The other case was a fibroid growth of the tonsil in a woman of 18 years. Examination of a piece removed for that purpose showed it to be a fibroma. A pendunculated or encapsulated growth can be cut down upon and removed, but this occupies the right half of the throat, extending down to the epiglottis, is a solid hard mass, without any evidences of the growth externally. He suggested external incision for removal, but this was refused, and as a last resort he used electrolysis. The lower part of the tumor had disappeared but the upper portion remains the same.

DR. H. W. LOEB, speaking of the first case, believed it to be true laryngeal vertigo. A case he knew of, occurring in the practice of Dr. Mulhall of St. Louis, had been much improved by a simple hygienic plan of treatment.

DR. D. B. KYLE reported the case of a man, 60 years of age, who had contracted whooping-cough from his grandchildren, would gasp following a paroxysm until unconsciousness supervened, gradually beginning breathing again. Free purgation, and the exhibition of podophyllin and sodii phosphate gave great relief. In whooping-cough the only lesion that is discoverable is an enlargement of the glands at the back of the pharynx and esophagus; during a fit of coughing pressure is increased on the recurrent laryngeal nerve.

DR. M. F. COOMES reported the case of a woman, 65 years of age in whom there was a growth similar to the one reported by Dr. White. He had advised operative interference, but upon cutting down on the tumor and finding the true condition he desisted and advised against further interference.

THE JOURNAL OF THE
AMERICAN MEDICAL ASSOCIATION.
61 MARKET STREET, - CHICAGO.

SATURDAY, APRIL 28, 1900.

DEFORMING ARTHRITIS.

Of the obscure nature of this disorder evidence is afforded by the contrariety of names that have been given to it, namely, arthritis deformans, rheumatoid arthritis, rheumatic gout. The condition is, however, generally believed to be in no way related to either rheumatism or gout, so that the preferable name for the present would seem to be arthritis deformans, or its English substitute, deforming arthritis. We have in a previous article described a morbid process—chronic villous arthritis—attended with hyperplasia of the articular synovial membrane, and which, while it presents a certain superficial resemblance to deforming arthritis, is characterized by features that serve to distinguish it from the latter disorder. These points of differentiation were recently fully discussed by Schüller.[1] In deforming arthritis the morbid process involves essentially and principally the articular cartilage. It consists in a proliferative hyperplasia of the cartilage-cells, swelling of the cellular spaces, fibrillation of the cartilage toward the free surface of the joint, and also destruction and eburnation of the altered cartilage at the center and at points of contact or friction in the joint, and in ossifying prominences at the periphery of the hyperplastic cartilaginous tissue at the margins of the articular extremity. In the soft parts adjacent to the articular extremities ossifying induration occurs at times, which has been designated para-arthritic ossification. These changes are responsible for the attending deformity, while the alteration in the shape of the joints in cases of chronic villous arthritis is due not to changes in the articular extremities of the bone, but essentially or exclusively to the formation of villi and other chronic inflammatory alterations in the synovial membrane or the capsule of the joint. It is true that deforming arthritis may be attended with villous hyperplasia of the synovial membrane, but this is less marked and of subordinate importance and it does not determine the anatomic condition of the disease. The villi, further, present macroscopic and microscopic differences in the two disorders. The villi of deforming arthritis are firmer, consist of connective or fatty tissue in a state of simple chronic inflammation, often with a deposition of cartilage, but without the abundance of blood-vessels seen in villous arthritis, without dumb-bell shaped bacilli and without the peculiarly grouped and diffuse large-cell and extremely abundant cellular hyperplasia. Deforming arthritis always begins in the cartilage, never in the synovial membrane, and the essential pathologic alterations consist in changes in the cartilages and in the articular extremity of the bones, while these are wanting in villous arthritis. These differences can be distinguished clinically on physical examination, especially on palpation; although sometimes the characteristic appearance of the joint, and particularly in marked cases the irregular, often bladder-like prominence or dilatation of the joint-capsule permits the recognition of the disorder on inspection; while in marked cases of deforming arthritis the altered form and position are sufficient for diagnosis. On careful palpation of the diseased joints it may be possible to detect the villi and their arrangement, the character of the synovial membrane and the condition of the articular cartilage on the one hand, or the want of accentuation or prominence of the free margins of the articular extremities on the other. X-ray examinations may disclose the conditions present in marked cases of deforming arthritis, but the results are uncertain in cases of villous arthritis, particularly when other methods of examination fail, and they are thus only of negative value. Villous arthritis is generally attended with considerable pain in the joints, both spontaneously and on pressure on the swollen capsule and on the villi. In women the pain is increased at the menstrual period. The pain of deforming arthritis is in general slight, and it is usually present only on functional use of the part. Further, in spite of often not inconsiderable impairment of mobility due to deforming arthritis, the functional use of the affected parts is interfered with much less and much later than in cases of villous arthritis, which early induces profound disturbances. Further, deforming arthritis occurs generally in life, in the second half, and only exceptionally earlier, and not rarely involves a single joint, particularly after an injury. On the other hand, villous arthritis develops preferably in the first half of life, at a vigorous age, and often in youth. Traumatism is exceptionally or not at all a predisposing cause for villous arthritis involving a single joint. This variety appears much less commonly than deforming arthritis in a single joint. The general condition suffers much less in connection with multiple deforming arthritis than with multiple villous arthritis.

Believing that the ossifying change in the articular extremity in cases of deforming arthritis depends on disturbance in the excretion of the bone-salts, Schüller has examined the urine in all cases that have come under his observation, and has almost constantly found marked diminution in the lime-salts and the earthy phosphates. The urine has generally a low specific gravity, and rarely an acid reaction, being usually neutral and sometimes alkaline. While the normal elimination of lime-salts is from three to six grains daily, in cases of deforming arthritis it was found to be from ¼ to 1¼ grains. It has been discovered also that the amount of calcium, magnesium and phosphoric acid, not only in the urine, but also in the stools, is diminished in cases of deforming arthritis. These changes must be referred to a derangement in metabolism, and they suggest that lime is re-

[1] Berliner Klin. Woch., 1900, Nos. 5, 6, 7.

tained in the joints or is deposited therein in increased amount, and it was found by histochemic means that the cartilage contained an excess of lime-salts. The deposition of lime-salts in the cartilage exerts both a destructive and an irritating influence, causing nutritive disturbances, fibrillation and necrosis, as well as cellular proliferation. These histologic alterations give rise to the characteristic anatomic changes in the joint that develop under the influence of pressure and friction in the course of functional use, while at the same time, in consequence of the continued abnormal supply of lime-salts, the swellings and prominences resulting from proliferation of the cartilage-cells and inflammatory irritation of the periosteal tissue undergo ossification. The evidence suggests further that the changes that take place in the synovial membrane in cases of deforming arthritis are due, in part at least, to abnormal deposition of lime-salts. Possibly also the free cartilaginous or bony bodies found in joints in cases of deforming arthritis have a similar origin. It would be expected that the changes described would occur more readily in a joint whose nutrition had been impaired, and it may be that deforming arthritis occasionally follows previous articular disease for this reason. Deforming arthritis involving a single joint is, further, not rarely observed in the sequence of traumatism or fracture.

Deforming arthritis is believed not to be of bacterial origin, but to be a metabolic disturbance characterized in part by the deposition of lime-salts in the bone, cartilage and soft parts of joints, with diminished elimination of lime-salts in the urine. These abnormalities must in turn be referred to disturbances in nutrition, and it will be found that most patients presenting this disorder are constipated or exhibit irregularity in bowel movement, with flatulence, dyspeptic symptoms and digestive derangement of various kinds. It may be that in consequence of fermentative processes in the digestive tract, or other undetermined metabolic disorder, lime-salts are taken up in excess from food and carried to the joints.

Deforming arthritis has hitherto proved extremely resistant to treatment, and physicians have generally been satisfied to relieve the pain of the acute stage or exacerbations and, if possible, to stay the progress of the disease. Sometimes the disorder seems to reach a stationary period, but this can not often be attributed to therapeutic intervention. Many remedies have been recommended, as in all chronic and obstinate affections. Hydrotherapy, together with the provision of the best hygienic and dietetic conditions, comprises perhaps the best general measure. Among drugs, arsenic, cod-liver oil, phosphorus, iodids and salicylates may be employed. Active and persistent counterirritation has at times seemed to yield beneficial results. Quite remarkable results have been reported from the use of hot air in the treatment of deforming arthritis, and while the procedure is one that requires time and perseverance, it should receive the application of which it has proved worthy. As a result of his studies Schüller believes that for cases of deforming arthritis a milk diet is not indicated, as milk contains considerable lime. Kefyr should not be employed for the same reason. A mixed, easily digested diet, with a deficiency of lime is best. All food that is capable of readily undergoing fermentation in the digestive tract is to be avoided. Carlsbad water or salt is advisable, employed for about four weeks, and then followed by massage and hydrotherapy, with douches and baths. This plan of treatment may be repeated from time to time. As a result the pains in the joints are lessened. The tumefaction diminishes, mobility is increased and locomotion is rendered easier. In mild cases local articular manifestations recede, while even in severe cases amelioration of the symptoms results. As a rule, also the amount of calcium in the urine increases under this treatment. Occasionally operation may be required.

UNUSUAL LESIONS OF VERMIFORM APPENDIX.

According to the statistics brought forward by A. O. J. Kelly,[1] it appears that "of 1391 cases of carcinoma of the intestine, the rectum was the seat of the new growth in 988 cases, the large intestine in 251, the cecum and the appendix in 79, the ileum in 32, the jejunum in 17, and the duodenum in 24." Of the 79 cases involving the cecum and the appendix it is not possible to learn how many were primary in the appendix; Kelly could find but five cases in this series in which the carcinoma was clearly limited to the appendix; in addition he enumerated thirteen other cases of carcinoma of this structure. Among 706 appendices, removed by Deaver and examined by Kelly, he found three instances of carcinoma and one of endothelioma. These four cases are of interest because in all the operations by which the appendices were removed were undertaken for the relief of the clinical symptoms of appendicitis, and in three cases inflammatory changes were present in addition to the neoplasms, which were microscopic in size and undoubtedly primary in the appendix. In the fourth case, which ended fatally, the exact origin of the tumor—carcinoma—could not be established, the probabilities, however, pointing to its origin in the appendix. In view of the fact that the symptoms were those of appendicitis and the tumors were microscopic in size, it seems not unlikely that systematic examination of appendices removed by operations would reveal a larger number of tumors in the appendix than our present information indicates. The occurrence of repeated inflammation in a structure like the appendix would seem to tend to establish conditions favorable for tumor growth.

The presence of worms in the appendix has been occasionally noted. At a recent meeting of the Philadelphia Pathological Society Frazier[2] reported a case of removal of an appendix which was found filled with oxyures vermiculares. Frazier points out that while worms could not per se cause appendicitis, yet their presence in large number might play the part of predisposing

[1] Proc. Phila. Path. Soc., 1900, iii, 109; THE JOURNAL, April 7, p. 876.
[2] Ibid., 129.

causes, interfering with the drainage of the appendix and creating conditions favorable for microbic growth. At the same meeting G. G. Davis[3] reported an instance in which a segment of tapeworm was found lodged behind a constriction in an acutely inflamed appendix, and Beyea referred to the presence of a single oxyuris in an appendix. Kelly recalled the fact that Saracenus, in 1642, described an abscess in the right iliac region, with discharge of fecal matter and fourteen lumbricoid worms, this being the first case of appendicitis—perityphilitis—recorded.

Another rather unusual but interesting abnormal condition of the appendix is its presence in hernias. Jopson[4] describes a case of inguinal hernia that contained the appendix, which was gangrenous from strangulation near its origin; the patient died from general peritonitis. Peterson[5] recently estimated the number of cases of hernia of the appendix reported in the literature at 116. Jopson goes over the facts in regard to hernia of the appendix with great detail, and many interesting features are recounted, which are not suitable, however, for repetition at this time. The appendix may occur in inguinal as well as in crural hernias, but the case recently described by Bouglé and Dartigues[6] is probably quite unique. It concerns a strangulated, right femoral hernia, containing the appendix, in a woman, age 63; laparotomy was made and the appendix, which was healthy, reduced; three days later a strangulated inguinal hernia developed, which also contained the appendix, but this time it was inflamed. A second laparotomy was made, the hernia reduced, and the appendix removed. The patient died. The autopsy showed a normal peritoneum, the heart dilated and fatty, and the kidneys sclerotic. In this case, as in so many of appendiceal hernia, the strangulation of the appendix gave rise to complete intestinal obstruction, due most likely to reflex action.

These observations serve to illustrate the variety of important pathologic conditions in which the appendix, though such a small structure, plays the essential rôle.

ACTION OF HEAT AND COLD ON CELLS AND TISSUES.

Some time ago two interesting and rather novel investigations into the action of heat and cold on certain cells and tissues were published, the principal results of which follow. Hochhaus[1] points out that comparatively little is known about the microscopic changes that develop after the action of very low temperature on the tissues. He therefore arranged a set of experiments by means of which he exposed circumscribed areas of the kidneys and the liver to the action of intense cold produced by carbonic acid gas under high pressure. Two hours after the application of cold there developed swelling of the protoplasm of the renal cells and evidences of nuclear disintegration; four hours later the nuclei disappeared, the vessels became hyperemic and some hemorrhage took place; in twenty-four hours leucocytes had emigrated only to disintegrate; after a few days calcification of numerous renal cells had taken place, which was followed by connective-tissue proliferation and ultimate encapsulation of the calcified area without any attempt at regeneration of the surrounding tubules. In the liver the early changes were similar to those in the kidney, but the connective-tissue proliferation began earlier and was more marked than in this organ; within four to eight days numerous multinuclear giant cells appeared, whose fate is not followed any further than to note their disappearance in some way. Eventually an external scar resulted

Fuerst[2] studied the changes in the human and animal epithelium, that result from the action of moderate degrees of heat and of cold. The experiments were originally undertaken in order to study the results, on cell proliferation, of pure hyperemia, uncomplicated by traumatism and inflammation. According to the views of Ribbert, under whose direction this investigation was carried out, increased blood-supply to an organ separates the cells from each other, diminishes the normal tension and thus liberates, as it were, the latent proliferative energy of the cells. The preliminary results[3] obtained from the study of the action of moderate cold produced by a spray of ether on the ears of rabbits and guinea-pigs, were such that an elaboration of the experiments so as to include the changes produced by repeated applications of moderate degrees of cold and of heat on both the animal and human epidermis was undertaken. The degree of heat applied did not exceed 52 C. for two minutes at one time. It was found that brief, frequently repeated applications of mild degrees of heat and cold produced, both in man and the animals employed, a marked thickening of the epidermis; this was due especially to an enormous hypertrophy of the cells as well as, in the second instance, to cell proliferation. The changes of the corium are limited to hyperemia. In the cells of the epithelial covering of the milk and sebaceous glands numerous and large multinuclear giant cells make their appearance early; it is assumed that the abnormal temperature produces an injury to the protoplasm while the nucleus remains normal; this damage to the protoplasm removes the normal hindrance to the proliferation of the nucleus, which now is given full sway to proliferate.

It was found that thermal stimuli of this sort in the guinea-pig hasten regeneration threefold. The action of high temperature can be successively increased without damage, up to a certain degree, for the tissues adapt themselves to the new conditions and acquire a relative immunity. Fuerst also found that the application of cantharidin and chemical agents in weak solution induces

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3 THE JOURNAL, April 7, p. 876.
4 Proc. Phila. Path. Soc., 1900, iii, 119.
5 THE JOURNAL, 1899, xxxiii, 1407.
6 Bull. et Mem. de la Soc. Anat. de Paris, 1900, lxxv, 73.
1 Virchow's Archiv, 1898, 154, 320.

2 Ziegler's Beiträge, 1898, xxiv, 415.
3 Embodied in Fuerst's inaugural thesis, Ueber die Veränderungen der Epidermis durch leichte Kalteeinwirkungen, Königsberg, 1897.

similar proliferations without inducing giant cell formation. It is concluded that the hypertrophic processes observed are not so much attributable to any direct "formative" action of the thermal stimulus, nor to hyperemia, but are rather the results of primary tissue lesions; and as such examples of excessive regeneration. Fuerst suggests that the increased capacity for regeneration under these circumstances may be of advantage in clinical surgery, and recommends further experiments with this end in view.

QUARANTINE APPROPRIATIONS.

The Secretary of the Treasury has recently asked for an additional appropriation of $200,000 to prevent the introduction and spread of epidemic diseases, the previous appropriation of $300,000 being almost exhausted. In these days of large things this sum may not appear great, but it would be a very respectable fortune by itself. It is none too much, however, to pay for adequate protection,and is in this light an economical investment. The fund is used for quarantine purposes and the maintenance of a corps of medical inspectors at the various foreign ports whence infection is likely to come, including a large number of South and Central American stations, as well as those in Europe and Western Asia. The continued and increasing danger of the bubonic plague, as well as the permanent one of yellow fever, furnish ample means of utilizing this appropriation or even a still larger one.

MEDICAL THEOLOGY.

The Archbishop of Montreal is said by the *British Medical Journal,* to be thinking of founding a course on medical theology in Laval University. Our contemporary does not know just what medical theology is, but hopes that it may not be added to the already overburdened curriculum of the student. The term is new to us also, but if we may venture a guess, we would think the course might include certain questions of medical deontology such as those arising in connection with abortion, baptism, etc., which have been more or less extensively discussed by Roman Catholic theologians. The medical profession has generally held that the proper application of the recognized ethical principles is sufficient for all emergencies, but there are still some doctrinal points on which the church may deem some special instruction required, and that will also come within the compass of the proposed course. This is offered in default of an express definition as our idea of what is meant by "medical theology." In this or a similar sense we might have a Judaic or a Mormon medical theology as well as a Roman Catholic one. It is not probable, however, that their introduction into medical courses will be general or that they will cause theologic discord in the medical profession.

WATER-BORNE TYPHOID AND TEMPERATURE.

While it has been shown that many bacterial germs, as well as some higher organisms, will resist almost any known or applicable degree of cold and retain their vitality after subjection to the temperature of liquid air, it is also true that low temperatures do have a certain restrictive action on their growth. Even more than this, it appears to be also true that the ordinary cold of winter temperature has a destructive influence on certain pathogenic germs. Thus, while the pollution of ice used for dietary purposes has been known to cause intestinal disturbance, it appears that there is in the literature no record of any epidemic of typhoid fever having been caused this way. Sedgwick and Winslow[1] have investigated the action of freezing on Eberth's bacillus, with special reference to this point. While it is known that cultures of this germ are not sterilized by freezing, the question of its quantitative reduction by this agency has been little investigated. They experimented therefore by freezing a large number of test tubes of water inoculated with four different races of this bacillus and determined the reduction after various periods. The results, twenty tubes being averaged for each period, showed a rapid reduction ranging from 30 to 60 per cent. in the first hour and then decreasing to over 99 per cent. in two weeks. The last two or three bacilli in the thousand appeared excessively resistant, some remaining even after twelve weeks of freezing. Alternate freezing and thawing were found only slightly more destructive than constant freezing, and a water temperature a little above the freezing point not much less. Finally a few experiments on the formation of ice on a free surface showed that 90 per cent. of the germs present were excluded by physical processes. It would appear from these studies that the old popular notion that water purifies itself by freezing has in it more truth than some ardent sanitarians have been willing to admit. As a practical illustration, it would appear that a winter typhoid germ starting from Chicago via the drainage canal would in ninety-nine cases out of a hundred be frozen to death before reaching St. Louis, let alone any other perils it would meet with on its way.

CHARTER OF THE NEW YORK STATE MEDICAL ASSOCIATION.

During the recent session of the legislature of the State of New York, an act was passed granting a charter to the New York State Medical Association. The objects of the Association are defined to be "The Cultivation and Advancement of the Science of Medicine, the Promotion of Public Health and the Establishment of a Death Benefit Fund for the Dependents of Its Members." The Association was organized in 1884 as an incorporated Association of members of the medical profession of the state who adhered to the Code of Ethics of the AMERICAN MEDICAL ASSOCIATION, which had been discarded by the medical society of the state. During this long period of sixteen years the Association has maintained a vigorous growth, as its large membership of nearly 700 and its fifteen portly volumes of annual transactions abundantly attest. It has also gradually assumed a leading position among the medical organizations of the state and now ranks second to none in influence and power on all questions relating to medical education, public hygiene and other interests of the profession that require legislation. It has been for some time apparent that the Association would have to become

[1] Jour. of Boston Society of Med. Sci., March 20.

a chartered body to enable it to meet its increasing obligations to the profession and to the public. Accordingly a charter was prepared giving it needful powers in the management of its property, in the establishment of a "Death Benefit Fund" for the dependent of its members, to enable it to form distinct branches and subordinate county associations, and, finally, to give to it that legalized character necessary to the furtherance of cordial professional relations and fellowship between the medical profession of the state and of other states and of foreign countries through the medium of their chartered medical societies. We foresee that, with the granting of a charter by the New York legislature, a new era in the history of the Association is about to begin. Having the vantage ground of a chartered corporation, its power in the profession, in legislative halls, and in medical organizations at home and abroad will be greatly enhanced. Not the least of the benefits which will result from the larger activities of this Association will be realized by the AMERICAN MEDICAL ASSOCIATION. Sustained by the profession of the Empire State, compactly organized in district and county associations, the New York State Medical Association is certainly to become a powerful factor among the forces which will in the future direct and control the destinies of the great central organization.

HEMATOZOON INFECTION IN RATS.

Lydia Rabinowitsch and Walter Kempner's[1] study of the flagellate parasite of the rats' blood, the trypanosoma, establishes another example of hematozoon infection, like malaria and Texas fever, in which the infection is carried by suctorial insects, in this case by the flea especially. These insects draw the blood of the infected rats; the trypanosoma has the power of remaining alive for a time in the body of the insect, whence it is again deposited into a healthy rat during the act of sucking blood. The full cycle of development of the parasite has not been wholly traced, but based on analogy with malarial and similar infections we undoubtedly have here an instructive example of a hematozoon which requires two hosts for its existence, the rat and an insect like the flea. The complete demonstration of this double existence of animal parasites of the blood, through the work of such men as Manson, Theobald Smith, Ross, Grassi, Bignami and others, has introduced a new departure in the study of etiology and parasitology, with the immediate result that a clear insight has been obtained into the natural mode of infection in malaria, etc. It is of interest to observe that the above writers also show that in the case of the white rat, which does not seem to be spontaneously susceptible to the trypanosoma infection, experimental intraperitoneal inoculation with the blood of infected gray rats is followed by the development of a well-marked active immunity, the serum possessing protective and curative powers for both gray and white rats. Agglutinating phenomena were not present in the trypanosoma serum.

CONDITIONS OF TERROR IN CHILDREN.

The young are peculiarly susceptible to emotional influences, and these may be of intrinsic or extrinsic origin. Children are readily startled and easily frightened, and in them the imagination responds quickly to stimulation. These facts find their explanation in the irritability and instability of the nervous system in early life, and its prompt reaction to various stimuli. Indiscretions in diet and gastrointestinal, nutritive and metabolic disturbances, constitute the most common etiologic factors in the development of derangements of nervous functional activity in childhood. A not uncommon disorder, whose exact nature is unknown, but which is at times attributable to such an origin, consists in the occurrence of attacks in which the little patient cries out during sleep as if in fright, and is perhaps awakened in great terror. A similar condition of fright, without tangible or at least adequate cause, occurs, though less commonly, during the waking hours, either independently of or in conjunction with the disturbance during sleep. Three cases of this kind are reported by Still,[1] who enters on an interesting discussion of the nature of the disorder. He points out that children who suffer from so-called day-terrors are of excitable nervous temperament. Neurotic heredity is an important predisposing influence, and a family history of rheumatism is not uncommon. By some these states of terror have been thought to be related to epilepsy and mania, but the former are much more amenable to treatment than the latter. Mucous disease, probably with catarrh of the large intestine, is believed to be especially provocative of night-terrors, and often the nervous disturbance will cease when the intestinal disorder is corrected. Adenoid hyperplasia in the pharynx may play a similar rôle. It is not impossible that the same facts apply also to day-terrors. From a comparative and prognostic point of view these may be considered a more ominous disorder than night-terrors. In treatment, the most important factor is the removal of the exciting cause. Chronic intestinal catarrh will require rigid dieting, with the exclusion of potatoes, pastry and sugar, and the administration of alkalies, such as potassium citrate, perhaps with iron and compound decoction of aloes. Thread-worms, if present, or other cause of irritation, should be removed by suitable treatment. Sedatives, such as bromids, may be required for a time, and they may be combined advantageously with belladonna.

[1] Ztft. f. Hyg. u. Infektionskr., 1899, xxxi, 251.

Medical News.

THE CONSTANT decrease in the number of medical students in France still continues. From 2212 in 1891, the number rose to 8897 in 1894, and has since then fallen gradually to 8230 this year, which includes 817 foreigners.

ARBITRATION OF SCIENTIFIC QUERIES.—Arbitration has never been applied to scientific questions, but three scientists at Buenos Ayres have agreed to adopt it to decide to which belongs the credit of the discovery of the microbe causing the disease among sheep known as "lombriz" or worms. Dr. Lignières first described it and, later Mercanti and Dessy described another, which Lignières claims is identical with his. The director of the bacteriologic laboratory, Dr. Rivero, has accepted the task of deciding the question after thorough investigation. Dr. Lignières is now experimenting on a large

[1] The Lancet, February 3, p. 292.

scale with his vaccin against Texas fever—which he calls "bovine malaria"—under the supervision of a committee appointed by the department of agriculture.

THE INTERNATIONAL sanitary council of Egypt has been advertising for four physicians for the quarantine stations at Suakin, Kosseir, Damietta and Moses' Springs, and one woman physician for the station at Suez. The salary is about $120 to $140 a month.

BELGIAN PRACTICE.—As previously mentioned, our Belgian exchanges recently advocated that professors should give up family and general practice and confine themselves to teaching and to consultations. The *Berliner Aertze Corr.*, March 3, reports that twenty-five young physicians in Budapesth have signed a petition to this effect, presented to the medical faculty, calling attention to the fact that the members of the law faculty are prohibited from private practice, and that the overworked medical professors now leave most of their clinics and lectures to their assistants. The Berlin journal adds that the professors and specialists in Berlin have also a more or less extensive general practice and that only the energetic protests of the profession will put an end to this "Unsitte." "When the general practitioner refuses to join in a consultation with such competitors, the evil will soon disappear of itself."

FOREIGN PHYSICIANS IN ITALY.—The Italian government has about decided to insist that all foreign physicians wishing to practice in Italy must first pass the examination required of native physicians, unless from a country in which duly accredited Italian practitioners are allowed to practice without restrictions, which is not the case in England or Germany. The only exception to be allowed is when a physician accompanies or is sent for by a special patient or family and limits his attention to these individuals. The wealthy "resorters" in Italy are now treated by their countrymen settled in Italy, and this the Italians propose to share in. They also claim that some of the most successful foreign practitioners are not regularly graduated men. The younger Italian physicians, we are told, are familiar with English and German, and Italian science as a whole takes a high rank. It is peculiar in that it is not centralized as in other European countries, but groups of scientific workers are scattered over the country, clustering around men like De Renzi and others of international fame, connected with the numerous universities.

DISTRICT OF COLUMBIA.

AT THE Casualty Hospital the following medical work was done during the past three months; emergency department, 175 cases, 149 operations and 26 cases admitted to the wards; dispensary service, 336 cases treated, 59 operations performed, and 1517 prescriptions compounded.

AN AMENDMENT to the District appropriation bill has been offered by Senators McMillan and Gallinger, granting $100,000 for the purchase of ground and the construction of a building to be used as a municipal hospital under the direction of the District Commissioners.

DWELLINGS FOR THE LABORING CLASSES.

One of the appendices to the report of the Health Officer of the District of Columbia (Document No. 7 of the present Congress) deals with the housing of the laboring classes in the city of Washington. From this it appears that a very successful experiment is in progress in that city. Several years ago inquiries were instituted into the insanitary conditions affecting the dwellings of the poor by certain local societies interested in the public welfare. The result of this investigation showed the existence of many insanitary dwellings in the alleys of the city, including houses without cellar or attic, drainage, sewage or piped water-supply, with the interiors greatly over-crowded and the surrounding air foul-smelling from box-privies and stables. Immorality and crime were found to be prevalent in these alleys, some of which were narrow cul-de-sacs hidden by neighboring buildings and their very existence unknown except to the initiated. For such undesirable accommodations the rentals were found to be relatively much higher than those of better conditioned dwellings in other and better localities. The recommendations based on this investigation were the speedy conversion of all alleys containing a sufficient number of houses into minor streets and places, and the condemnation of those which could not be straightened, widened to thirty feet and provided with an exit at each end.

The Commissioners of the District appointed a committee, one of the duties of which was to consider the need of sanitary dwellings for the poor. Surgeon General Sternberg submitted, from this committee, a report which, after reciting the condition of the alley dwellings, announced the opinion that there was need for legislation by Congress, by which tenements unfit for human use should be condemned and destroyed, blind alleys opened, narrow ones widened, branch sewers constructed and gas and water introduced so that sanitary tenements might be constructed in the minor streets and alleys "to be rented to the poor as low or lower than are the insanitary dwellings now occupied by many of them." Pending legislation on the subject the Committee recommended the organization of a sanitary improvement company. This company was formed and incorporated in April, 1897, and since then twenty-eight houses, containing fifty-six sanitary flats, each consisting of four or five rooms with bathroom, cellar and closets, have been built and occupied to the material advantage and comfort of the occupants as well as to the financial advantage of the philanthropic individuals who took stock in the company to promote its objects, for during the past three years it has proved a safe 5 per cent. investment. The report of the health officer gives plans of the buildings, which are two-storied, each story constituting a flat, with separate entrance, cellar and yard. The lighting and ventilation are good and the plumbing the best. Each has three large closets and the kitchen is provided with a range, a hot-water cylinder, dressers and sinks. To promote care of the property on the part of tenants, one month's rent in each year is allowed for interior repairs, and if the money is not required for this purpose the tenant receives the benefit of the allowance or of so much of it as remains after required repairs have been paid for.

The success of this experiment shows how much may be done, with no financial risk, to improve the sanitary condition of the poor in certain localities. Where building ground is high-priced, large tenements may be a necessity, to keep the rentals within the financial ability of the individual tenants, notwithstanding the greater danger from the spread of infectious diseases and from fire in such large and crowded buildings; but there are many cities in this country where the poorer classes of the community would be benefited by action taken on the lines adopted by the Sanitary Improvement Company of Washington, D. C.

PENNSYLVANIA.

THE ANNUAL charity ball for the benefit of the Williamsport Hospital was held April 15.

THE STATE authorities recently examined fourteen cattle in Lancaster County, and five proved to be tubercular and were killed.

THE DEDICATION of the Phœnixville Hospital occurred April 14. An ambulance was presented by James M. Crawford of Philadelphia.

HOSPITAL REPORT.

The annual meeting of the Presbyterian Hospital Association, Allegheny, was held April 17. The reports showed that 249 patients had been admitted to the hospital during the year. There is a total of $40,000 in the endowment fund. The balance in the current fund last year was $265.93; the income from pay patients was $6446.19. The receipts from all sources amounted to $11,141.19.

Philadelphia.

THE LATE Joseph H. Gillingham left $1000 to the Woman's Hospital.

A PATIENT at one of the hospitals of the city recently leaped from the third story of the building and sustained a fracture of the leg.

DR. CHAS. W. BURR has resigned from the Medico-Chirurgical College, his resignation to take effect at the close of the present term.

BY THE will of Mrs. Margaret Carter, $13,000 is left to the Jefferson Hospital, Philadelphia, for the establishment of a free bed.

THE RESIDUARY estate of Frederick Muehlig, who died in this city some time ago, amounting to $5000, has been left the German Hospital of Philadelphia, for endowing a free bed.

DURING THE past week the new Nurses' Home of the Hospital of the Protestant Episcopal Church was dedicated. Its completion was largely made possible by the gift of $100,000 from J. Vaughan Merrick; $4000 is being asked for toward the purchase of current literature for the home.

BY THE will of Ann K. Horner, $2000 has been left to the following named institutions: Germantown Dispensary and Hospital, Episcopal Hospital and Home for Aged and Infirmed Colored People; $14,000 to the Home for Incurables.

THE PURE Butter Protective Association is waging warfare against offenders of the laws restricting the sale of oleomargarin. During the past week thirteen persons were arraigned for violations of the law, and in each instance a fine of $50 was imposed.

SEVERAL hospitals, by the will of the late George W. Miles, will in time become beneficiaries as follows: Hospital of the Protestant Episcopal Church, Presbyterian and St. Joseph's hospitals, each $8000. The Pennsylvania and the Children's Hospital, the Home for Consumptives and the Germantown Dispensary and Hospital, each $5000; Maternity Hospital, $6000.

THE TOTAL number of deaths during the week just closed was 739, an increase of 48 over the preceding week and an increase of 234 over the corresponding period of last year. The principal causes were: cancer, 12; tuberculosis, 84; heart disease, 46; influenza, 31; pneumonia, 23; measles, 24; nephritis, 36.

OHIO.

CONNEAUT'S Board of Health has adopted a resolution requesting the Board of Education to pass an ordinance requiring the vaccination of all school children.

THE REPORT of the Columbus Health Department for March shows 162 deaths during the month. There were 12 fatal cases of typhoid fever, 1 of measles, 3 of diphtheria, 1 of croup, 19 of consumption and 22 of pneumonia.

Cincinnati.

DR. OTIS CAMERON has been appointed city bacteriologist and attached to the Health Department.

DR. JOHN M. ADAMS has been appointed physician to the city infirmary, vice Dr. Thomas P. Hart.

DR. H. H. HINES has been appointed surgical clinician to the Miami Medical College. He has just finished his service at the City Hospital.

THE HEIRS of the late Dr. John A. Murphy have turned over his large collection of medical books and pamphlets to the City Hospital's library.

THE HEALTH officer has adopted plans for more perfect sanitation among the tenement houses, which require district physicians to investigate more thoroughly and file written reports in the health office.

Toledo.

FOR MARCH the Health Department reported 159 deaths.

THE LATE Robert Hunter devised $1000 to the Protestant Hospital, on condition it be held, invested or expended by the officers of the hospital in such manner in and about the institution as may be directed by the Toledo Medical Association.

MARYLAND.

DR. J. F. H. GORSUCH, of Fork, has been appointed director of the Female House of Refuge.

THE RESIDENCE of Dr. Wm. H. H. Campbell, Owings' Mills, was destroyed by fire April 17. The Doctor's loss is about $5000, partly insured.

PLANS HAVE been prepared for the erection of the Frederick Hospital. The structure will be of brick, equipped with all modern improvements, and will cost about $10,000.

HOSPITAL IMPROVEMENTS.

Now that the large bequest of the late Enoch Pratt is available through the decision of the Supreme Court of the United States, noted in these columns last week, plans for the improvement of the Sheppard and Enoch Pratt Hospital, in the suburbs of Baltimore, are being formed. A casino will be built on the grounds, about 300 yards from the main building. It will be a low building, with a large porch and will be fitted up with bowling alleys, pool and billiard tables, and other games. The ground around will be laid off in tennis courts and for other sports. The building will cost about $20,000. The water-supply, for which reliance has hitherto been placed on the numerous springs in the place, will be increased by several artesian wells. Enlarging of the lighting plant is under consideration, to permit of lights on the driveways and a railroad station in connection with the Baltimore & Lehigh R. R., is another design. No additional buildings to the hospital proper are contemplated, as only curable cases are admitted and the present accommodations are considered sufficient.

Baltimore.

THE COMMENCEMENT of the College of Physicians and Surgeons was held April 24. There were 35 graduates.

THE SUPERVISORS of city charities, who have by law the control of the appropriations to these institutions, have adopted the plan of having visitors look after their management.

AT THE nineteenth annual commencement of Baltimore Medical College, held April 17, 61 received diplomas, one "*magna cum laude*," and 6 "*cum laude*." It is the custom of this institution to administer the Hippocratic oath to all graduates. A banquet followed in the evening.

DR. JOHN F. MANGER has filed a petition in the Court of Common Pleas, for a writ of mandamus requiring the State Board of Medical Examiners to issue him a permit to register as a physician, in accordance with the act of 1896 and the decision of the Court of Appeals in his favor. (See previous mention in THE JOURNAL.)

NEW YORK.

THE GOVERNOR has signed the bill authorizing the city of Buffalo to spend $50,000 on a quarantine hospital.

APPOINTMENTS.

Governor Roosevelt has appointed the following gentlemen to serve as trustees of the New York State Hospital for the Treatment of Incipient Pulmonary Tuberculosis: Howard Townsend, Manhattan, for the term of five years; John H. Pryor, Buffalo, for four years; Willis G. Macdonald, Albany, for three years; Walter Jennings, Manhattan, for two years, and Frank E. Kendall, Saranac Lake, for one year.

BILL FOR DRUG CLERKS.

The legislature has at last passed the bill granting shorter hours to drug clerks and guaranteeing to them certain privileges of importance to their health. The new law provides that in cities of one million or more inhabitants drug clerks shall not work more than seventy hours per week, or more than 136 hours in two consecutive weeks; that one hour shall be allowed for each meal; that they shall receive at least one full day off in two consecutive weeks, and that they shall not sleep in the drug store or in an apartment connected with such store.

APPROPRIATION DECREASED.

The action of the legislature in cutting down the appropriation for the State Pathological Institute for this year, from $36,000 to $20,000, means that the studies being carried on there will have to cease altogether, or that the scope of the work must be materially curtailed. The real reason for this action of the legislature is to be found in a difference of opinion between members of the lunacy commission regarding the character of the work done at the institute. Dr. Peter M. Wise, the head of the present commission, is a staunch believer in the old clinical method of studying insanity, while the past

work of the institute has been purely experimental and largely speculative.

INSPECTION OF CHARITY INSTITUTIONS.

Mr. Elbridge T. Gerry has once more shown conclusively that he is a powerful and successful lobbyist, for his victory in the contest between his society and the State Board of Charities is generally conceded to have been the result of his personal influence and work. It will be remembered that last January the Court of Appeals decided that the Society for the Prevention of Cruelty to Children was not a charitable institution, and that the State Board of Charities had no right to inspect institutions which are supported by private benevolence. This decision was so unexpected and so sweeping in its effect that a motion for a reargument was made. The Court of Appeals has, by a vote of 4 to 3, denied this motion, thus confirming the former opinion. This will have the effect of greatly crippling the powers of the State Board of Charities. It is estimated that 600 charitable institutions in the state will thus be freed from the inspection of the board.

New York City.

A CASE of elephantiasis in a woman of 48 years, a resident of New York City, and a native American, is now being treated in the Bellevue Hospital.

DRS. GEORGE B. FOWLER, ex-commissioner of the health department, and E. R. L. Gould, have been appointed by the governor on the Tenement House Commission.

THE FRIENDS and professional associates of Dr. A. Jacobi are arranging for a fitting celebration of his 70th birthday, next month.

ONE OF a group of acrobats, while attempting a triple somersault fell and dislocated the sixth vertebra. Dr. B. Farquhar Curtis cut down on the injured part, and reduced the dislocation. The vertebral column was then supported by a plaster-of-Paris jacket, and there is every indication that the operation will be a success.

AMONG THE missionaries present and to speak at the Ecumenical Conference, April 21 to May 1, is Dr. Jacob Chamberlain, who began his work in India in 1859.

NEW MT. SINAI HOSPITAL.

A gift of $200,000 has been made for the new Mt. Sinai Hospital, for the erection of a special building as a memorial to a deceased member of the family of the givers. This makes the total amount promised for the proposed buildings more than $1,500,000, leaving only about $400,000 to be provided for. Other recent gifts include $125,000 for a children's pavilion, $20,000 for an operating theater and $55,000 for a dispensary building, the three latter also being memorials.

UNSANITARY HOSPITAL.

The unsanitary state of Gouverneur Hospital is just now attracting the attention of the public, and well it may, for there are several inches of water in the cellar, and this is the third time in the past few months that the basement has been flooded. Superintendent O'Rourke is disposed to make light of it, and says that it is no worse than most other buildings in that part of the city. The old building was long ago condemned for hospital purposes, and a new building has been erected, but owing to some trouble with the contractors it remains unfurnished and unoccupied.

CHEST ABNORMALITY.

An Italian, 42 years of age, a patient at the Long Island College Hospital, is exciting much interest among the physicians and surgeons there because of a peculiar developmental abnormality of the chest. It is reported that after an X-ray examination it was determined positively that on the right side of the thorax three ribs are only partially developed, and, as a result, there is an area measuring four by three inches in which the bony wall is lacking. The man insists that this strange deformity has not materially interfered with his work.

ILLINOIS.

Chicago.

DR. E. J. SENN will return from his wedding tour June 1.

DR. TRUMAN W. MILLER, who has been suffering from la grippe for the past six weeks, is now convalescing.

DR. CHARLES H. BEARD has been appointed a member of the international jury of awards at the Paris Exposition.

IT IS reported that nearly half of the Red Cross Ambulance Corps, which was organized in this city, deserted the corps and took up arms in behalf of the Boers, on their arrival in the Transvaal.

THE TOTAL mortality during the past week was 561, an increase of 3 over the week preceding. The infant mortality was 24 in excess of last week. Pneumonia claimed 125 victims, and consumption 52.

INDIANA.

HOSPITAL ADDITION.

A joint meeting of the members of the Indianapolis Board of Public Works and of the Health Department was held April 14, to investigate the needs of the city hospital. It was decided to erect, if possible, a new wing on the east and north sides of the present building, to be 40 feet wide and 135 feet long. The wing will be similar in construction to the rest of the building. It was also decided to build a new contagious disease ward.

WISCONSIN.

DR. C. L. KISSLING has been appointed a member of the Milwaukee School Board.

A PUBLIC hospital will shortly be established by the Madison Hospital Association, which has purchased four lots in the city for this purpose.

NEW JERSEY.

THE SUM of $50,000 has been appropriated for building a new wing for the reception of female patients at the State Hospital for the Insane, Morris Plains.

ANTHRAX is reported in Salem County, and four cattle belonging to one person have been killed. The daughter of the owner is believed to have become infected by drinking milk from the diseased animals.

THE ANNUAL meeting of the Bridgeton Hospital Association was held in Bridgeton, April 17. Since the opening of the hospital last June, 67 patients have been treated and 50 operations performed. Receipts from all sources were $3207.57, and at the present time there is $753.53 in the treasury.

MISSOURI.

PATHOLOGY SPECIMENS DESIRED.

Dr. Hugo Summa has been appointed to arrange the individual exhibit of the state in the pathologic section at the Atlantic City meeting of the AMERICAN MEDICAL ASSOCIATION, Missouri being allowed an exhibit of not more than one hundred specimens. Dr. Summa requests the members of the profession of the state to inform him of their willingness to loan rare or important specimens for this purpose. Each specimen should be plainly labeled, with the diagnosis of the lesion, the contributor's full name and address and the number corresponding with the accompanying case history. Professor Summa will be glad to furnish any particulars that may be desired. His address is 2249 St. Louis Avenue, St. Louis.

SPECIMEN FROM HIP-JOINT.

An interesting specimen was presented at a recent scientific session of the St. Louis Medical Society—bone removed from the hip-joint by resection—doubly interesting as involved in a case of malpractice brought against two homeopathic physicians of St. Louis, connected with the Good Samaritan Hospital. The point was thoroughly discussed as to the propriety of physicians giving testimony as experts on one or the other side of such cases, Dr. Fairbrother questioning the advisability of giving such evidence and Dr. Broome maintaining that while it was a delicate question, yet there were cases where no honorable physician could decline to give evidence when called on, no matter whose interests the evidence might affect.

INCREASED CHARTER RIGHTS.

There having been an impression in the St. Louis Medical Society for some years that it did not have full power to expel members guilty of unprofessional conduct, on account of the fact that some years ago an expelled member secured a mandamus, from the courts, demanding his reinstatement, the officers of the Society last week made application to the circuit court for greater powers and privileges along these lines. The court granted an enlargement of the charter rights. The real cause of the Circuit Court twenty years ago,

in the case of Dr. Adam Hammer, granting him the injunction for which he applied against the St. Louis Medical Society for expelling him, was not based on the ground that the Society did not have the right to expel him, but that it had appointed a committee to investigate his case and that he was tried not by the Society, but by the "committee on ethics," and that a committee composed of a limited number might easily be prejudiced, so that the member should be tried in an open session of the Society, with full opportunity for presenting his defense. This decision of the court should have prompted the Society to have pursued this method in other succeeding trials against recalcitrant Fellows; instead it gave them a case of fright and non-action was the result.

CALIFORNIA.

THE MONTHLY report of the Oakland Board of Health shows that there have been thirty cases of contagious diseases in the city during the past month. No deaths therefrom have occurred.

THE ALAMEDA Board of Education has adopted a rule forbidding employment as a teacher in the public schools of any person who is afflicted with tuberculosis.

CLAIRE C. YOUNG, assistant demonstrator of chemistry in the medical department of the University of Southern California, Los Angeles, had the misfortune to lose his right eye through an explosion which occurred while he was demonstrating phosphureted hydrogen. The eye was so much injured that enucleation was necessary; the left eye was not affected.

MASSACHUSETTS.

THE DIRECTORS of St. Mary's Infant Asylum and Lying-in Hospital have decided to erect, on the grounds of the institution, a larger and more commodious building, to be used exclusively for children. It will be five stories high, 100 feet long and 50 wide.

Washington.

ACCORDING to the report of the Seattle Board of Health, the month of March witnessed more deaths than any month this year. There were twenty deaths from pneumonia. Forty cases of scarlet fever were reported.

CANADA.

SEVERAL CASES of actinomycosis were discovered last week among cattle near Montreal.

DR. LEVERETT PRICE, Monckton, N. B., who went to South Africa with the second contingent, has been given a position by the Imperial Government, at St. Helena, to help look after the health of the Boer prisoners.

THE CITY health officer of Winnipeg reports that city as freer from contagious diseases than for many years. There are at present no cases of infectious diseases in the city.

THE REPORT of the resident physician at the Victoria (B. C.) Jubilee Hospital, shows that, on March 31, there were 37 patients; admitted during the month, 53; treated, 90; discharged, 45; deaths, 5.

IMMIGRANTS landing at St. John, N. B., are being subjected to a very strict surveillance, as it is believed that some of the foreigners afflicted with favus, to whom the U. S. authorities refused passports, have found shelter in St. John and also in Sydney, C. B.

SCARLET FEVER still continues very prevalent in Montreal. The Civic Hospital is full of these patients. The health department attributes the prevalence of the disease to the filthy condition of the streets of the city. Several new cases of typhoid fever have also been reported during the last week.

TORONTO UNIVERSITY ALUMNI.

Graduates of the provincial university, from all over the province, assembled in the chemical building of Toronto University on the evening of the 17th, for the purpose of organizing an alumni association. During the course of the remarks of President Loudon, who was called to the chair, he stated that the graduates of the University in all departments numbered something like 10,000, and that heretofore they had been as so many units, not in a position to promote the interests of the University hence the need for organization. A draft constitution was unanimously adopted and, as evidence of the part which the medical department will take in the organization, Dr. Reeve, the dean of the faculty, was elected the first president of the association, and Dr. Otto Klotz of Ottawa, the first vice-president. Several medical graduates were also elected on the Council.

THE MEDICAL COUNCIL OF CANADA.

A draft of the proposed Act to incorporate the Medical Council of Canada has been published, and deals in detail with the purposes, etc., of this long-sought-for end. The composition of the Council is identical with the published statement reported in THE JOURNAL early last fall, viz., three members from each province of the Dominion (the Northwest Territories being counted as a separate province), these to be chosen as follows: One from each such province shall be appointed by the Governor-General-in-Council, one from each such province shall be elected from each such medical council of such province, and the president of each provincial medical council shall be *ex-officio* a member of the Council. The term of office for appointed members shall be four years. The Council may acquire and hold such real estate and personal property as may be necessary, the annual value not any time to exceed $100,000. The officers are to be a president, a vice-president, an executive committee and a registrar, who may be secretary and treasurer. The first meeting will be held in Ottawa, and thereafter as the Council decides. It will have power to appoint a board of examiners to be known as "The Medical Council of Canada Examination Board." The proposed bill provides for two classes of examinations, viz., the preliminary or matriculation examination and the professional examinations. Candidates may elect to be examined in the English or in the French language. All of the practical and clinical examinations shall, until otherwise decided by the Council, be held in Montreal and Toronto, alternately. Registration according to this bill is similar to that already outlined in THE JOURNAL referred to. It is stated that several French practitioners in the Province of Quebec are not in favor of the legislation.

TORONTO ASSOCIATION FOR PREVENTION AND TREATMENT OF CONSUMPTION.

While this association has commenced an active campaign looking toward the establishment of sanatoria in and about the city, and further doing something toward educating the people as to the prevention of this disease, there are not a few who assume that it will and does antagonize the work of the National Sanitarium Association, as already manifested in its work at Gravenhurst. In sending out its constitution and literature broadcast throughout the province of Ontario, the Association seeks to complete and perfect its organization, and in addition secure a large membership. In it the clergymen of different denominations seem to figure prominently, several medical men and not a few laymen, also exerting themselves in its behalf. The prosecution of the work is an indication of the interest the community is commencing to display in the prevention and treatment of tuberculosis. The provincial secretary of health, Dr. Bryce, has stated that he is in accord with the objects of the Association. From the address which Dr. Sheard delivered at the last meeting of the executive, it is evident that the city medical health officer favors undertaking this work on a larger scale than by the experimental and piecework plan. The first general meeting of the Association was held in Toronto on the 23d.

HAWAIIAN ISLANDS.

THE SUSPICIOUS case of illness reported early in the month from Hilo proved not to be bubonic plague.

THE TWO cases reported as plague, at Makao, Koolau, on the 6th, proved to be other than this disease.

REPORTS FROM Kahului, Maui, March 21, show there had been no case of plague reported for twenty-four days.

Honolulu.

A PUBLIC morgue is to be built, the Board of Health having appropriated $10,000 for the purpose.

THE EXPENSE lists now being rendered, for "necessaries" in stamping out the plague, include many things usually considered luxuries—everything, in fact, from soda water, cigars, liquors, etc., to an enameled bath tub at $40.

DR. WOOD, president of the Board of Health, largely through whose efforts the plague epidemic in the islands was stayed, proposes to resign from the Board.

THE AVERAGE expense for fumigation and disinfection for March was $25 a day. It is estimated that the average will be $22 a day for April.

FOR INOCULATIONS by Haffkine's prophylactic serum, at $2 per capita, the Board of Health has taken in $1640.

THREE PARTIES have been fined $25 each for adulterating coffee, and one $5 for selling oleomargarin without a label.

DR. CHAS. A. PETERSON has retired from the position of call physician to the Board of Health, and will resume his former duties as inspector of immigrants.

CERTAIN OF the rice and taro patches in the city limits have been ordered filled to grade level, by the Board of Health, for sanitary reasons.

AT A MEETING held by the Victoria Hospital Association, the by-laws for the Hospital for Incurables were discussed and adopted and officers elected for the ensuing year.

DR. CARMICHAEL, of the U. S. Marine-Hospital station, has furnished the health authorities with 2000 doses of antipest serum, as the supply at the headquarters of the Board of Health was very low.

ABOUT 800 Japanese have petitioned the Board of Health to remit their taxes for 1900, as they are unable to pay them on account of the hardships suffered from the burning of Chinatown during the plague epidemic.

THE MORTALITY report for March gives 112 deaths, consumption leading the list with a total of 21, while bubonic plague is credited with 6. The deaths from typhoid fever numbered 19. As usual, the greater mortality was among the Hawaiians.

REPORTS on April 9 show that no cases of plague had been reported here for eight days, the first record of two Sundays passing with no cases reported, since the beginning of the epidemic. The seventy-first case was reported on the 2nd, the patient being a white girl 13 years of age.

NINETY-SIX inspections of milk samples taken on the street were made during February. The highest percentage of solids found was 12.5, the lowest 9.75; the highest percentage of butter fat 3.5, the lowest 1. The policy of warning milk dealers on first offense has been continued and sixteen warning letters sent out.

QUEEN'S HOSPITAL.

There are at present 68 patients in the hospital, 27 being Hawaiians. Those admitted during the past quarter numbered 185, 66 of whom were Hawaiians, 7 Chinese, 21 Japanese, and 91 other nationalities. Of these 166 were discharged and 27 died. The causes of death were: abscess of liver, anemia, asthma, cancer of stomach, fracture of skull, gangrene, peritonitis and stab wound, each 1; pneumonia, 7; meningitis, 6; railroad injury, 2; typhoid fever, 3. There were 9 major and 5 minor operations and three post-mortem examinations.

RATS AND THE SPREAD OF PLAGUE.

The efforts of the Board of Health to bring about the destruction of rats and so avoid dissemination of the plague, have not met with the results desired. Chickens, Chinese and children seem to have eaten about as much of the rat poison placed throughout the city as did the rats, and the smallness of the bounty allowed for dead rats has been another factor in preventing their general destruction. The Board has therefore decided to appoint a "professional rat-catcher," and one Duval, a Frenchman, has completed a device for corralling the rodents, and has been authorized to make six rat-traps after his pattern at the Board's expense, experiments to be made therewith before he is officially appointed.

LOSSES FROM PLAGUE MEASURES.

On April 7 the Court of Claims to take evidence on losses caused by the burning of Honolulu's Chinatown and to make awards and judgments on such losses, was appointed by President Dole. It consists of a presiding member and four associates. The chamber of commerce took action opposing the appointments on the grounds that the appointees were all lawyers and that plague losses should be adjusted by business men. A mass meeting was also held by the Chinese and Japanese, who passed resolutions to the effect that no claims for damages should be presented to the court for adjustment, as under the existing rules, justice could not be obtained. An appropriation bill presented to the Council of State, providing for the expenses of the recently appointed court was tabled. Some of the members have offered to serve gratuitously.

April 9, 1900.

Correspondence.

The Rich Specialist.

DETROIT, MICH., April 10, 1900.

To the Editor:—The following letter has given me an opportunity to express my views on the subject of the big fees received by specialists. We often hear from general practitioners, in a jocose manner, and sometimes with an envious expression, about the fees received and the money accumulated by specialists. I have frequently talked with those of the latter class in the various departments of specialism, and have been convinced for many years that very few are getting rich. Perhaps it is their own fault. They spend too much, and still, to keep in the front rows, they must do it or drop by the wayside. As soon as they strive to make money and cease trying to advance and improve the practice of medicine, their usefulness as teachers ceases. Few are so situated that they can be workers, innovators, and financiers at the same time. In fact, the whole question of financial success is to a great extent a personal one. It is a question of personality and, as a rule, the great men of the world have not been successful financiers.

BROOKLYN, MICH., February 12, 1900.

DR. J. H. CARSTENS,
DETROIT, MICH.

Dear Doctor:—Can you give me, without too much trouble, the number of hysterectomies and laparotomies you performed during the year 1899, in which you received no fees? I am preparing a reply to the speech of the Hon. L. D. Watkins at the Association of Farmers Clubs, at Lansing, in which he uses your charges in Culver and Dunn cases as an argument—"to regulate the fees of physicians by law." Yours truly,

E. N. PALMER, M.D.

DETROIT, MICH., March 1, 1900.

DR. E. N. PALMER,

My Dear Doctor:—In answer to your letter, I will say that you have my reprint reporting 234 cases of abdominal sections during 1898. (I made an error in addition. The reprint gave ten less than the actual number.) Of these, 83 paid. The rest of them I did for nothing or received a small consultation fee only, when they first saw me. I have just looked up last year's work as you requested. You remember I was sent as delegate to the International Congress of Gynecologists at Amsterdam and was away nearly three months, and lost at least a month before and after in my work, so that for 1899, I can only figure that I did two-thirds of the work. In hastily looking over the records—there might be a mistake in a case or two—I find that during that year I operated on 172 cases of abdominal sections of various kinds. Of these, 52 paid as follows: 1, $600; 2, $300; 2, $250; 5, $200; 6, $150; and 36 paid $100. The latter seems to be the usual figure that people expect to pay, and that they are told by their family physicians they must expect to pay. This is entirely wrong. If able, they ought to pay a great deal more.

Besides this, there were 16 patients who agreed to pay but did not, and I gave the bills to a collector and he did the best he could and compromised, taking for the bills whatever he could, from $10 to $50. Seventeen of the non-paying patients also paid me a consultation fee of $5, $10, or $25, when they first saw me, but when it came to the operation, they were unable to pay. I never agree to do abdominal section for less than $100. I will do it for nothing, for glory and love of the race, but I will not belittle such an operation by accepting $25 or $50, as some are very glad to do. I try to uphold reasonable prices.

According to our fee-bill, abdominal sections are placed on

the list as $500 to $3000 operations, but certainly in this city no such fee as the latter figure has ever been paid. If I think people are able, I charge them the minimum fee-bill price, but generally I find that people are not as rich as they appear to be. They keep up appearances on a limited income, and I am obliged to take half. With people in fair circumstances, who have permanent positions or an income of about $2000, I always insist that they pay $150 or $250 for an operation, but the mass of your patients have small incomes, from $50 to $65 a month, probably with a large family, and for them it means quite a hardship to pay even $100 when you add to it the hospital expenses. They probably have to pinch and economize for two years to make it up. So that, as I stated above, a great number can only pay $100. What would you do with all the other poor patients? Here comes a working man with appendicitis. If he is not operated on, I am sure he will be dead in twenty-four hours. I try to save his life. He earns $1.25 a day and he has six children. How he must save during the next year to pay for his three weeks hospital expenses! Here comes a poor "schoolmarm" from the country, who earns $15 a month and has a fibroid tumor. Do you suppose I have the heart to send her home and tell her that she must have $150 or $200 first, before I can operate on her? You know I have not, but operate. Here comes the poor widow with three children, working in a store, or as a cook in a hotel, eking out an existence. Can I charge her, or can I charge the riff-raff, the paupers, sent in at the county's or state's expense?

So you see that I average less than $50 apiece for my work in abdominal surgery. It all seems great at a distance, but when you are doing the work yourself, you will find it is entirely different. They hear of isolated cases paying a fair fee, and expect they all do. Certainly if they would all pay $500 or even half that much it would be an immense income. But when you consider that my expenses, office rent or interest, my horses and coachman, stenographer, printing, stamps enough to support a family, books, instruments, reprints, having plates made, photographs, making experiments, and paying men to do them for you, attending medical societies all over the country, keeping posted and trying to be up to date: that all these things cost me about $7000 a year, and that before I have even anything to eat or clothes for my family, then you can readily see that the specialists are not getting rich very fast. In fact, they often have to look out to pay their running expenses.

In fact, my dear doctor, I have often stated that if I wanted to make money and be easy and comfortable and not have to worry, nor have a dozen men pulling at my coat-tails and trying to pull me down out of pure envy and cussedness, if I wanted to lead a nice comfortable life and leave my family in good circumstances, I would be a general practitioner—or a farmer. I could do away with nearly all the expense, keep a few good journals, keep well posted and up to date, treat everything that comes along, charge a fair fee and get my money; if I had a special case which I could not handle, turn it over to a specialist in whatever department it belonged.

From my observations I have found that the men who do general practice have the best financial success. They have less worry and anxiety, calling in counsel to share the responsibility when they have a difficult case. In the long run they make the most money.

The few *real* specialists I know simply make their living, and sometimes have trouble to do that. They spend too much trying to advance the practice of medicine and teaching their fellow-practitioners newer methods, newer views of treatment and prevention of disease. *The lot of the innovator is always a hard one.* The leaner or the one who floats with the stream does not have to exert himself very much. I sometimes ask myself, "Does it really pay?" I often have my doubts.

You will remember that for nearly twenty-five years I was a general practitioner, that after a dozen years' practice I drifted to a great extent into obstetrics, having as many as 200 cases a year, and this prevented me, in the course of time, from doing much general work. In the process of evolution, my practice developed into abdominal surgery. When I had to do more abdominal surgery, it was impossible for me to do an operation and do justice to the patient if I was up all night with a case of confinement. So I finally, about ten years ago, gave up all general practice and obstetrics and have absolutely limited my practice to abdominal surgery and gynecology.

The large general and obstetric practice which I have given up has been distributed among the physicians of the city. There is not one, I believe, who does not have a patient I formerly had, or has not a case of obstetrics in the course of a year which I would have if I was still competing with him, and when I see some of these same men who have increased their practice and income because I am not competing with them; when I see these men take their cases to men who are competing with them in different lines of practice, I then ask myself, "Does it really pay to be a REAL specialist?"

Why should you not be a general practitioner or a general surgeon and treat anything that comes along? For instance: measles or whooping-cough, if it is in the grandchild of a millionaire; or dyspepsia or throat troubles or conjunctivitis, if the patient is wealthy; why should not I treat ingrowing toe-nails, chancres, or simple fracture, if the patient can pay a good fee?

There are all kinds of sides to the question. Again, when I have physicians bring their wives, or their daughters, or their sons, to me for operations (and if there is any kind of cases I delight to treat and help, it is these of my professional friends), I operate on them with great pleasure and take great pains, but when in the future these same physicians forget to send me other patients who might pay or, even if they did not pay, simply show their good will; when they forget to do this, then again I ask myself, "Does it really pay?" They do not mean any harm. They feel grateful but they are thoughtless. They allow patients who can pay to pass out of their hands and drift somewhere else. I would remind you that they are not all that way by any means, but we meet them quite often. But when some physicians ask a percentage of my fee, then I rebel and talk right out; despicable and discouraging, is it not?

Perhaps I could get better prices. It may be my own fault, but I will not be imposed on if I can help it. I insist on a good fee if people can pay, but will not take people aside, and the first question, ask, "How much can you pay for this?" I never ask them. If they ask me how much I charge, I tell them that we will settle it after the operation, but expect them to pay a fair fee, according to circumstances. After the work is done, I try to find out their financial condition and charge them accordingly. Once in a while they lie and impose on me, but not very often.

There is another thing I abhor, i. e., to have some wealthy persons edge up to me and say: "How much will you charge?" I tell them: "Why do you ask me how much I charge? Why should you not write out a check for a fair amount, as is the custom to a great extent in Europe, and say, "Here, my dear doctor, I am under everlasting obligations to you for saving my life (or that of my wife, or daughter, or son, or whatever it may be) and here is an honorarium to help you along in your noble work." Then people stare and open their eyes. They can not understand it. They say they are not philanthropists. They are willing to pay a fair fee, but they do everything on business principles. It makes me "tired" sometimes, as the boys would say. I wish they had less "business principles" (which means mathematical calculations of interest and filthy lucre), but had more sentiment, gratefulness, and the milk of human kindness.

. . . I have the figures of my own practice and can make that a basis for argument. Mine is simply a reflex of other *real* specialists. I know that *real* specialists, be it in laryngology or neurology, be it in ophthalmology or orthopedic surgery, be it in dermatology or gastroenterology, are all the same. They can tell you about the same story that I have, except a few who are in very large medical centers. I can show you that the *honest real specialist* does not get rich from his practice. The, what you might call, "pseudo-specialists," who *pretend* to be specialists but who treat anything that comes along, provided there is money in it, may be a great financial success, but those who try to contribute their mite to the advance of the science of medicine, are to a great extent financial failures. But we are not discouraged. We keep on in the chosen path with the motto, *Speramus meliora*—"we hope for the better"—that some time in the future we may find somebody whose gratitude will be greater than his love for money.

My dear doctor, I am as optimistic as ever. I am perfectly satisfied. I find a great deal of glory in the practice of medicine. Some of the greatest fees I ever received were the grateful tears of patients. I find, after all, there is a good deal of gratitude. I am under a world of debt to members of the medical profession who have encouraged and supported me by sending me patients; those members who are honest and uphold the Hippocratic oath, "The highest good of our patients shall be our constant endeavor;" those members of the profession whose continual effort is to relieve suffering humanity, who are honest and, if they do not have the facilities to treat

the patients themselves, carefully look around and select whom they think is the most competent; men who never think of self but of the good of the patient, who never ask for percentage but ask that the patient have the best care. I have any number of such noble friends, who continually send good paying patients to me and for whom I have never been able to do any favor. I often feel guilty, but some time hope to reciprocate, and be able to do them favors.

I take special pains to instruct the patients to return to the physician who sent them to me, for after-treatment, often giving them a note or sending a letter direct. It happens, however, occasionally, that the patients do not want to return. They have become vexed at something, and think they have been neglected. They have all kinds of notions. I am obliged to defend the physician and insist that they return for after-treatment. Thus I try to uphold the reputation of the general practitioner and save his patients to him. I *try* to be a *real* specialist.

In the meantime, I try to keep up the good work, and hope that the time will come again, when this wild struggle for the mighty dollar will lessen, and men will be gauged by the good deeds they do, by their mental capacity and not by the amount of money they can make. Your truly,

J. H. CARSTENS, M.D.

National Therapeutic Society.

WASHINGTON, D. C., April 16, 1900.

To the Editor:—The attention of the Therapeutic Society of the District of Columbia having been called, through several articles recently published, to the formation of a national therapeutic society, at a recent meeting it was decided to take the initiative steps, with representatives of other therapeutic societies, looking toward the formation of such a national body. I have been instructed to ask that THE JOURNAL aid us in this movement. We would suggest that all therapeutic societies, or as many as desire, throughout the United States, elect and send delegates, with such an object in view, to meet in this city, May 1-4, at the time of the meeting of the Association of American Physicians. The Eighth Decennial Convention for Revision of the U. S. Pharmacopeia holds its session here at the same time. The D. C. Therapeutic Society will be pleased to meet all such delegates at the medical department, National University, No. 1328 I Street, N. W., on Tuesday, May 1, 3 p. m., to take preliminary steps in this direction.

D. OLIN LEECH, M. D., Corresponding Secretary,
Therapeutic Society, District of Columbia.

Paris and the Midnight Sun.

Members of the ASSOCIATION who intend crossing the Atlantic to be present at the Thirtieth International Medical Congress should read the following, which explains itself:

WAR DEPARTMENT, SURGEON-GENERAL'S OFFICE,
WASHINGTON, D. C., April 13, 1900.

HENRY GAZE & SONS, 113 BROADWAY, NEW YORK, N. Y.

Gentlemen: I have received your circular headed "Paris and the Midnight Sun" and stating that a committee has been organized to arrange for this trip. Will you kindly inform me by what authority my name has been included among the members of this committee? I have no knowledge of my appointment upon such a committee, or of such a committee having met to consider the matter referred to, and I have no intention of making the trip which you advertise.

Very truly yours,

GEO. M. STERNBERG, Surgeon-General, U. S. Army.

Association News.

The Official Program.—In order to avoid misunderstandings and to protect the interests of advertisers, attention is called to the fact that there is but one official program. This program is copyrighted by the Board of Trustees and contains no advertising matter.

Section on Obstetrics and Diseases of Women.—The program of this Section is now full. Wednesday morning, June 6, will be given up to a "Symposium on Obstetrics;" Wednesday afternoon to one on "The Relation of Pelvic and Intra-Abdominal Diseases to Nervous Diseases." Thursday morning, June 7, will be devoted to the subject of "Cancer of the Female Generative Organs, Including the Breast;" Thursday afternoon to "Inflammatory Diseases of the Female Genitalia." The afternoon of Tuesday, June 5, and the morning of Friday, June 8, will be devoted to general papers.

Amendments to Constitution.—The following was offered by Dr. Dudley S. Reynolds, Louisville, Ky., at the last meeting of the ASSOCIATION: Proposition to amend Article 2 of the Constitution, by adding to the qualifications of membership in those societies eligible to send delegates to this ASSOCIATION. After the words "Marine Hospital Service of the United States," at the conclusion of the second paragraph; provided, however, that no State, county or other auxiliary body sending representatives shall receive into its membership any one who may after 1900 have received the degree of Doctor of Medicine on less than four years of graded instruction or an equivalent re-requirement (laid over for one year).

Committee on National Legislation.—Attention is again directed to the call to the National Legislative Conference of the ASSOCIATION, to be held in Washington, May 1 and 2 (see THE JOURNAL, April 21, p. 1019). The Chairman of the Committee on Arrangements of the Congress of American Physicians and Surgeons has extended an invitation to members of the National Legislative Conference to be guests of the Congress during the May meeting. Those wishing to accept this courtesy should call at the Bureau of Registration, in the Arlington Hotel, on their arrival in Washington, and on registration they will also receive cards to the reception, to the smoker to be given by the Cosmos Club on the evening of May 1, and the program for the meetings of the Congress. According to the by-laws, a physician may be accredited as a visitor by any one of the constituent societies and the certificate of the secretary of one of the societies that he is thus accredited will enable him to register on payment of the registration fee, but not to take part in the deliberations of the Congress.

Railroad Rates for Atlantic City Meeting.—The Committee on Transportation, of the AMERICAN MEDICAL ASSOCIATION, reports that the Trunk Lines Association has granted one- fare and one-third on the certificate plan, as the rate for the meeting in June. Tickets will be on sale in territory of these lines at this rate from May 30 to June 7, and are good to return to June 23. The Trunk Lines Association has invited the other railroad associations to concur in the rate and time limit. The Committee has been very much taxed in answering communications from nearly every section of the country suggesting means for securing a one-fare rate for the round trip on this occasion, and has adopted every expediency for securing the one-fare rate, but has been unable to obtain it. For the information of many of those who have written recently on this subject, we quote from the final communication from the Trunk Lines Association, dated April 4. After announcing the rate and time limit above noted, the secretary adds: "It is noted that you say it is still claimed by many, that the reduction of one fare should be granted for your meeting. I may state that your application has been twice before the Committee, and any greater reduction than fare and one-third on certificate could not consistently be granted; it would be a discrimination against other bodies." When the other railroad associations act on the rate, etc., of the trunk lines, the committee will make a full report announcing the rates throughout the states. H. L. E. JOHNSON, M.D., Chairman.

Section Headquarters at Atlantic City.—Following is a correct list of the hotels selected as headquarters for the different Sections. These hotels, with two exceptions, are all located on the board walk, directly fronting the ocean, and are considered the best hotels. Every effort will be made by the proprietors and their managers to furnish proper and pleasant accommodations to all who elect to stop with them. Each Section has been located separately, with a view of avoiding the crowding and general annoyance that has characterized a number of the previous meetings. The hotels are all well located

and are comparatively near the place of registration and the general meetings in the assembly hall, as well as the meeting places of the different Sections, hence no member need hesitate to arrange his accommodations at the one selected as the headquarters for his Section. The names and addresses of the presidents and secretaries of the different Sections have been placed in the hands of the managers of the respective hotels, and the latter have been requested to correspond with the former, asking for a list of the Sections' membership, that they may address each member and ascertain early about how many will be in attendance, and acquaint themselves as near as possible with the desired accommodation expected by each individual. Every member of the AMERICAN MEDICAL ASSOCIATION and all other physicians who expect to be in attendance should arrange for their quarters as soon as possible, as this will assure to them satisfactory accommodation and avoid disappointment at the last moment.

AMERICAN MEDICAL ASSOCIATION, Hotel Dennis.
American Academy of Medicine, Hotel Shelburne.

SECTION HEADQUARTERS.

Section on Practice of Medicine, Hotel Traymore.
Section on Surgery and Anatomy, Hotel Windsor.
Section on Obstetrics and Diseases of Women, Hotel Garden.
Section on Materia Medica and Therapeutics, Hotel Luray.
Section on Neurology and Medical Jurisprudence, Hotel Brighton.
Section on Ophthalmology, Hotel Haddon Hall.
Section on Laryngology and Otology, Hotel Seaside.
Section on Physiology and Dietetics, Hotel Ilsesworth.
Section on Diseases of Children, Hotel St. Charles.
Section on Cutaneous Diseases, Hotel Rudolph.
Section on Stomatology, Hotel Senate.
Section on State Medicine, Hotel Pennhurst.

Deaths and Obituaries.

S. E. SHELDON, M.D., Topeka, Kan., died of heart disease, April 19. He was born in Carlisle, Ohio, in 1837, receiving his early education at Baldwin University. He was graduated from the Cleveland Medical College in 1860. He entered the army as assistant surgeon of the 32d Ohio Vol. Inf., in 1862, being transferred to the 104th Ohio the next year and promoted to surgeon with rank of major, serving with that regiment to the close of the war. He was taken prisoner at Harper's Ferry in 1862, afterward exchanged, and was with Sherman's army at the siege of Atlanta. He was also a prominent member of the Masons, created Knight Templar in 1869 and in 1876 elected Grand Commander of Kansas. He was a resident of Topeka for many years and at one time represented that city in the state senate. He was professor of gynecology in the Kansas Medical College, a member of the Western Surgical and Gynecological Association, and a prominent figure at the meetings of the state and national organizations.

JAMES STANSBURY MARTIN, M.D., died in Baltimore, Md., April 14, aged 76. He was born in that city April 2, 1824, being the son of Dr. Samuel B. Martin, a surgeon of the War of 1812. He was educated at the Baltimore College, took his M.D. at Washington University, Baltimore, in 1844, and was resident physician to the Baltimore Almshouse, 1846-7. He resided in California from 1849 to 1855, and was surgeon to the Pacific Mail Steamship Company, and founder of Sutter's Fort Hospital. He returned to Baltimore in 1859, where he remained until 1861, when he removed to Brookville, Md., and practiced there four years. He then returned to Baltimore, where he remained until his death. He was one of the oldest members of the Medical and Chirurgical Faculty.

JOHN JOSEPH CRANE, M.D., born in Elizabeth, N. J., in 1851, died April 18, in the Adirondacks, from tuberculosis, after an illness of two years. He was a graduate of Princeton University and, in 1876, of the College of Physicians and Surgeons, N. Y. He practiced medicine in New York City for twenty years. He was at one time an assistant surgeon in an Illinois state insane asylum.

JAMES GUINAN, M.D., President of the Nevada State Board of Health, died in Chicago, March 24, after undergoing an operation for stricture of the bowels. He was born in Manchester, Mich., and served with the 17th Michigan Infantry during the Civil War. He was a member of the Nevada State Board of Medical Examiners, and of the ASSOCIATION.

ISAAC C. HARING, M.D., Albany Medical College, N. Y., 1850, died at the Nyack Hospital April 16. He had undergone an operation several days before. For fifty years he had practiced in Rockland County. West Nyack was his home for the past thirty years.

CHARLES E. TURNER, M.D., committed suicide on the 17th, at his home near Rising Sun, Md. His mind is said to have been affected from ill-health. He was born in Chester Co., Pa., and was graduated from Jefferson Medical College, and was about 42 years old.

A. BAILLIE PRICE, M.D., University of Maryland, 1867, died at Frostburg, Md., April 15 of pernicious anemia at the age of 59. He was born in Charles County, Md., and was educated at Charlotte Hall Academy. He first practiced three years at Stephens City, then for a short time at Ocean Mine, and for the rest of his life at Frostburg.

ORSON BUELL, M.D., dropped dead April 15, at South Norfolk, Conn. He was entering his home just after a professional visit. He was 71 years old.

H. DWIGHT BLISS, M.D., Holley, N. Y., died April 13, aged 46 years. He was graduated from Jefferson Medical College in 1883.

THOMAS P. HOSSIE, M.D., Queen's University, Kingston, Ont., 1878, died at Gouverneur, St. Lawrence County, N. Y., April 14, aged 41 years.

D. L. MUSTARD, M.D., died at Lewes, Del., April 2, aged 64. He leaves one son.

MARRIAGES.

BOLKCOM—GALES.—Dr. G. W. Bolkcom and Mrs. Ella C. Gales, Cedar Lake, Wis., April 13.

CARTER—SHERMAN.—Dr. Edwards Perkins Carter, Williamstown, Mass., and Miss Sarah Rathbone Sherman, Cleveland, Ohio, April 18.

DE NEEN—RENTZ.—Dr. D. E. De Neen, Reily, Ohio, and Miss Laura Rentz, Winton Place, Ohio, April 11.

SENN—LAROUSSINI.—Dr. E. J. Senn, Chicago, and Miss Alys Laroussini, New Orleans, La., April 24.

SLOCUM—CRAVER.—Dr. Charles E. Slocum, Defiance, Ohio, and Dr. S. Belle Craver, Toledo, Ohio, April 5.

Miscellany.

Acting Assistant-Surgeons, U. S. Army.—During the last session of Congress an effort was made to have the medical staff of the United States Army increased in proportion to the increase in the numerical strength of the army authorized at the beginning of the Spanish-American War. This effort failed, however, and chiefly because of the argument that when extra medical assistance is required for the army it can be obtained under the contract system. Under this system a medical man "promises and agrees to perform the duties of a medical officer agreeably to Army Regulations" for the sum of $150 per month, with quarters and the traveling allowances of a first lieutenant. From the governmental point of view a serious objection to this system is found in the inability of the United States War Department to secure experienced medical assistance under it. Young graduates in medicine are ready to take a contract for the sake of making a start in life and seeing something of the world; but when they have served long enough to gain experience in military methods and to be valuable additions to the medical strength of the army they hesitate to renew a contract which offers no promotion for continued service. A first lieutenant of the medical corps looks forward to a captaincy, with increased pay at the end of five years' service, but the surgeon on contract has no inducement of this kind. To remedy this Surgeon-General Sternberg has recommended the enactment of the following "Bill for the Appointment of Assistant-Surgeons of Volunteers:

Section 1. That "contract surgeons" who have rendered faithful and satisfactory service with the Army of the United States for a period of one year, and who have passed a satisfactory examination as to their physical and professional qualifications, shall be commissioned by the President as assistant-surgeons of volunteers with the rank of first lieutenant, subject to honorable discharge from the service whenever their services are no longer required.

Sec. 2. That at the end of two years' service as first lieutenants assistant-surgeons of volunteers, appointed in accordance with Section 1 of this act, who have rendered faithful and satisfactory service, shall be commissioned by the President as assistant-surgeons of volunteers with the rank of captain, subject to honorable discharge from the service whenever their services are no longer required.

In his letter to the Secretary of War the Surgeon-General urges that the proposed legislation be enacted during the present session of Congress, both in the interests of the service and in justice to the large number of contract surgeons who are now in the service and on whom, to a large extent, devolves the duty of caring for the sick of our armies at stations in the United States, in Cuba, in Puerto Rico, in Alaska and in the Philippines. He represents also that these acting assistant-surgeons, although serving as civilian physicians under contract, have all the responsibilities of commissioned medical officers, and that it is the natural and proper ambition of every one of them who has rendered faithful service to obtain a commission from the President of the United States. Owing to the small number of volunteer surgeons (34) at present authorized, few of the contract surgeons have any prospect of being commissioned under existing laws. So far as pay is concerned, an acting assistant-surgeon would be a loser if commissioned as an assistant-surgeon of volunteers with the rank of first lieutenant, as the pay of the lieutenant is less than that of the surgeon under contract. The bill submitted, however, proposes to promote those who have been in active service for three years to the grade of captain if their services have been faithful and satisfactory. This is a good bill. Its passage would remove many of what have been called the grievances of the acting assistant-surgeons, and would materially improve the efficiency of the medical department.

AMERICAN NEUROLOGICAL ASSOCIATION.

The twenty-sixth annual meeting is to be held at The Normandie, Washington, D. C., May 1-3.

Address by the President, Edward D. Fisher.
Christian Pseudoscience and Psychiatry. Smith Baker.
Imperative Ideas in the Sane and Their Management. Edward B. Angell.
Case of Wernicke's Conduction Aphasia, with Autopsy. Howell T. Pershing.
Case of Bullet Wound of the Spinal Cord. Joseph Sailer.
Contribution to Study of Plantar Reflex, Based on 750 Tests, Made with Special Reference to the Babinski Phenomenon. G. L. Walton.
Tumor of Superior Parietal Lobule, Accurately Localized and Removed by Operation. Charles K. Mills and W. W. Keen.
Case of Polio-Encephalitis, with Autopsy. Charles L. Dana.
Autopsy of a Case of Adiposis Dolorosa, with Microscopic Examination. F. X. Dercum.
Report of Committee on Neuronymy. Burt G. Wilder.
Comments on Current Figures of Mesal Aspect of Brain. Burt G. Wilder.
Studies in Astereognosis. F. X. Dercum.
Case of Adiposis Dolorosa, with Autopsy. Charles W. Burr.
Report of Case of Progressive Muscular Atrophy which Clinically Presented Symptoms of Amyotrophic Sclerosis. Joseph Collins.
Amelioration of Paralysis Agitans by Means of Systematized Exercises. J. Madison Taylor.
Epilepsy and Autointoxication. Smith Baker.
Anatomico-Cytologic Relationship of Neuron to Disease of Nervous System. L. F. Barker.
Pathologic Changes in Neuron, in Nervous Disease. William G. Spiller.
How Far Does it Affect Our Conception of Nervous Disease and its Treatment. B. Sachs.
Physiologic Significance of Size and Shape of Neuron. H. H. Donaldson.
Focal Cerebral Symptoms Without Gross Anatomic Changes as Seen in: 1, Uremia and, 2, Malaria. James Hendrie Lloyd.
Case of Malaria Presenting Symptoms of Multiple Sclerosis, with Necropsy. William G. Spiller.
Revised Interpretation of Central Fissures of Educated Suicide's Brain Exhibited to Association in 1894. Burt G. Wilder.
Regeneration of Cerebral Nervous System. Joseph Sailer.
Cases of Neurasthenia. Philip Zenner.
Communication on Comparative Study of Spinal Ganglia in Various Diseases and Ages. Adolph Meyer.
Obstetric Paralysis. H. M. Thomas.
Therapeutic Value of Sunlight in Neurasthenic Invalidism. Frank Hallock.
Report of Case of Brain Injury with Peculiar Whistling Spells Following Operation. William C. Krauss.
Erythromelalgia and Allied Disorders. B. Sachs and A. Wiener.
Case of Multiple Sclerosis, with Autopsy. Charles W. Burr.
Clinical Study of Reflexes. Joseph Collins and Joseph Fraenkel.
Clinical and Anatomic Analysis of Cases of Diffuse Myelitis. James J. Putnam and E. W. Taylor
Section of Posterior Spinal Roots for Relief of Pain in Case of Neuritis of Brachial Plexus; Cessation of Pain in Affected Region; Later Development of Brown-Sequard Paralysis in Area and Pain in Other Areas as Result of Laminectomy. Morton Prince.
Demonstration of a Few Reconstructions of Parts of the Nervous System. Adolf Meyer.
Two Cases of Tumor of Spinal Cord. John Jenks Thomas
Syringomyelia, with Exhibition of Microscopic Specimens. Graeme M. Hammond.
Prognosis of Hysteria. Joseph Fraenkel.
Relative Merits of *Metencephalon* and *Myelencephalon* as Designations of the Last (Oblongatal) Segment of the Brain. Burt G. Wilder.
Derivatives and Applications of the Word *Neuron*. Burt G. Wilder.
Exhibition of Dr. Stroud's Head-Rest for Removal of the Brain. Burt G. Wilder.
Some Unusual Types of Dementia Paralytica. Theodore Diller.
Note on Occurrence of Multiple Neuritis and Beri-Beri in Alabama. E. D. Bondurant.

AMERICAN DERMATOLOGICAL ASSOCIATION.

The program of the twenty-fourth annual meeting, to be held at the Hotel Gordon, Washington, D. C., May 1, 2, and 3, is as follows:

Address by the President, H. W. Stelwagon.
Bullous Dermatitis (dermatitis Herpetiformis?) in Children. Five Cases Following Vaccination. J. T. Bowen.
Dermatitis Vesico-Bullosa et Gangrænosa Mutilans. G. W. Wende.
Loss of Hair: Clinical Study Founded on 300 Private Cases. G. T. Jackson.
Unusual Phenomenon of Syphilis: Othematoma. Jos. Zeisler.
Report of Committee on Nomenclature.
Case of Brocq's Erythrodermie pityriasique en plaques disseminées. J. C. White.
Prophylaxis and Control of Leprosy in this Country. P. A. Morrow.
Case of Tinea Tonsurans Resembling Tinea Favosa, with Remarks. L. A. Duhring.
Frequency of Parasitic Diseases of the Skin, and Measures Advisable for Limiting Their Spread. W. T. Corlett.
New Type of Cutaneous Tuberculosis. J. C. Johnston and B. Lapowski.
General Discussion: Malignant Diseases of the Skin: 1. Their classification and clinical features. E. B. Bronson. 2. Their etiology and pathology. M. B. Hartzell. 3. Their treatment. F. J. Shepherd.
Endothelioma and Angiosarcoma of the Skin. J. A. Fordyce.
Etiology and Pathology of Cutaneous Cancers. A. Ravogli.
Report of Committee on Statistics.
Lantern-Slide Exhibit Illustrating 1. Some Clinical and Pathologic Features of Malignant Diseases of the Skin and Affections. J. A. Fordyce. 2. Clinical and Pathologic Features of Blastomycetic Infection of the Skin. J. N. Hyde and F. H. Montgomery. 3. A Few Rare Diseases of the Skin. G. H. Fox. 4. Pathologic Features of Cutaneous Cancers. A. Ravogli.
Case of Nevus Cancer; Metastasis; Operation; Cure. S. Pollitzer.
Syphilitic Lesions of the "Wheal" Type. H. G. Klotz.
Report of a Case of Multiple Tumors of the Skin. W. A. Hardaway and M. F. Engman.
Two Cases of Rhinoscleroma and an Unusual Form of Epithelioma of the Scalp. C. W. Allen.
Case of Xanthoma Tuberculatum Diabeticorum, Showing Rapid Disappearance of Lesions Under Antidiabetic Regimen and Treatment. S. Sherwell and J. C. Johnston.
Brief Report of Two Cases of Persistent Exfoliation of the Lips. H. W. Stelwagon.
Case of Protozoic Dermatitis. D. W. Montgomery.
Blastomycetic Dermatitis and Its Relation to Yaws. I. Dyer.
Three Cases of Blastomycetic Infection of the Skin, One of Them Producing a "Tumor" of the Lower Lip. F. H. Montgomery and H. T. Ricketts.
Review of the Subject of Blastomycetic Infection of the Skin with a Report of Two New Cases. J. N. Hyde.
1. Some Experimental Observations on Urticaria Factitia; 2. Report of Case (Title to be Announced). T. C. Gilchrist.

AMERICAN GYNECOLOGICAL SOCIETY.

The twenty-fifth annual meeting of this Society is to be held in Washington, D. C., May 1-3, in the Columbian University. The program is as follows:

Address of Welcome. Joseph Taber Johnson, Washington, D. C.
Technique of Operations for Intraligamentous Tumors. W. H. Wathen, Louisville, Ky.
Fecal Fistulæ. I. S. Stone, Washington, D. C.
A Study of the Remote Results of Conservative Operations on the Ovaries and Tubes. W. L. Burrage, Boston.
Internal Secretion of the Ovary. A. W. Johnstone, Cincinnati, Ohio.
Techniques, Indications, and Ultimate Results of Suturing Round Ligaments to Vaginal Wall for Retroversions and Flexions of Uterus. Hiram N. Vineberg, New York City.
Comparison of Vaginal and Abdominal Operations. G. Richelot, Paris, France.
Demonstrations of Casts Illustrating the Anatomy of Pregnancy and Labor, also Models Used in Gynecologic Teaching. J. Clarence Webster, Chicago.
Combined Nephrectomy and Ureterectomy. E. E. Montgomery, Philadelphia.
Anastomosis of Ureters with Intestines. An Historic and Experimental Research. Reuben Peterson, Chicago.
Critical Survey of Ureteral Implantation. J. W. Bovée, Washington, D. C.
An Appreciation of Kelly's Method of Removing Fibroids of the Uterus. A. Lapthorn Smith, Montreal.

Migrated Ovarian Tumors. George M. Edebohls, New York City.
Best Method of Extirpating Fibroid Uteri. Howard A. Kelly, Baltimore, Md.
Bronchial Disease not Invariably a Contraindication for Ether Anesthesia in Abdominal Surgery. Thaddeus A. Reamy, Cincinnati, Ohio.
Treatment of Full Term Ectopic Gestation. Should not the Child Receive More Consideration? Edwin B. Cragin, New York City.
President's Address. G. J. Englemann, Boston, Mass.
Relationship Between Dysmenorrhea and Appendicitis. Archibald McLaren, St. Paul, Minn.
Clinical Data Relating to: 1. Urinary Toxemia. 2. Operative Treament of Uterine Displacements. 3. Ectopic Gestation. 4. Certain Complications of Uterine Fibroids. Egbert H. Grandin, New York City.
1. Demonstrating the Utility of a Certain Chart for the Determination of Pelvic Asymmetry from a Very Simple Method of External Pelvimetry. 2. Advantages of Employing a Certain Background in Photography of Pathologic Specimens. Philander A Harris, Paterson, N. J.
Contribution to Management of Face Presentations, with Report of Two Cases. Malcolm McLean, New York City.
Pernicious Nausea of Pregnancy, with Report of Cases and Autopsy E P. Davis, Philadelphia.

ANNIVERSARY EXERCISES.

Personal Reminiscences Associated with Progress of Gynecology. T. Addis Emmet, New York City.
Status of Gynecology in 1876 and in 1900. Alexander J. C. Skene, Brooklyn, N. Y.
Reminiscences of the Foundation and Early Years of the Society. James R. Chadwick, Boston.
Personal Factor in Work of American Gynecological Society. E. Van de Warker, Syracuse, N. Y.
Some Kaleidoscope Pictures in Rhyme. Thaddeus A Reamy, Cincinnati, Ohio.

THE AMERICAN GASTRO-ENTEROLOGICAL ASSOCIATION.

The third annual meeting of this Society will be held at The Shoreham, in Washington, D. C., May 1. The following papers are announced:

Occurrence of Mould in the Stomach and its Probable Significance. Max Einhorn.
Sugar, as such, in the Dietary of Dyspeptics. Wm. Gerry Morgan.
Concerning Nature of Biologic Cell Process in Malignant Neoplasms and Their Significance for Early Diagnosis of Cancer of Stomach. J. C. Hemmeter.
Appendix and Cecum from the Standpoint of the Gastro-Enterologist. A. L. Benedict.
Feeding the Sick. A. P. Buchman.
Starvation vs. Feeding in Diseases of the Stomach—Illustrated. Frank H. Murdoch.
Case of Cancer of Esophagus; Perforation Into Left Pleura; Death from Pyopneumothorax. Exhibition of Specimen. Julius Friedenwald.
Some Clinical Observations on Position and Topography of Stomach. G. W. McCaskey.
Remarks on Stenosis of Pylorus. Henry W. Bettman.
Report of an Interesting Case. E. G. Cutler.
Mechanics of Digestion. F. B. Turck
Epigaea. Charles D. Aaron.

AMERICAN CLIMATOLOGICAL ASSOCIATION.

The seventeenth annual meeting of the Association will be held in the banquet room of the Arlington Hotel, Washington, D. C., on May 1, 2 and 3. The sessions will be at 10 a. m. The program is as follows:

President's Address. Abraham Jacobi, New York City.
Modern Physician's Duty to His Tuberculous Patients. Frederick I. Knight, Boston.
Construction and Management of Small Cottage Sanatoria for Consumptives. Arnold C. Klebs, Chicago.
Report of Certain Cases of Tuberculosis Which Were Apparently Due to the Nature of the Soil. Richard Cole Newton, Montclair, N. J.
Educational and Legislative Control of Tuberculosis. Charles Denison, Denver, Colo.
Some Phases of the Tuberculous Problem in Colorado. Sherman G. Bonney, Denver, Colo.
Some Personal Observations on the Effect of Intrapleural Injection of Nitrogen Gas in Tuberculosis. H. P. Loomis, New York City.
Bacterio-Therapeutics, with Especial Reference to Tuberculosis. E. R. Baldwin, Saranac, N. Y.
Subsequent History of Patients Apparently Cured by Antitubercle Serum. J. Edward Stubbert, Liberty, N. Y.
Stomach Conditions in Early Tuberculosis. Boardman Reed, Philadelphia.
Phlebitis of Advanced Phthisis, with Report of Cases of Phthisis Following Abscess of Hand. R. G. Curtin. Philadelphia.
Diagnostic Value of Tuberculin in Tuberculosis. James S. Anders. Philadelphia.
Spleno-myelogenous Leukemia with Pulmonary Tuberculosis. Report of Case. H. L. Elsner and Wm. A. Groat, B.S., Syracuse, N. Y.
Hydriatic Treatment of Tuberculosis. J. H. Kellogg, Battle Creek, Mich.
Petroleum Oil in Treatment of Phthisis. W. D. Robinson, Philadelphia.
Stamina: The Special Benefit of Fat, of one Kind or Another, as a Necessary Article of Diet to Fortify the System Against Tubercle Bacilli. A. N. Bell, Brooklyn, N. Y.
Inadequacy of Physical Signs as Indicating Gravity of a Pneumonia. Andrew H. Smith, New York City.
Blood Changes in High Altitudes. S E. Solly, Colorado Springs, Colo.
The Bath in Gout. Charles C. Ransom, New York City.
Case of Mural Endocarditis. Harold Williams, Boston.
Exercises Suitable for Children Suffering from Heart Disease. J. Madison Taylor, Philadelphia.
Prognosis in Disease of the Heart. James B. Walker, Philadelphia.
Report of Case of Dissecting Aneurysm Causing Death by Rupture Into Pericardial Sac. Judson Daland, Philadelphia.
Some Thoughts on Nervous System in Phthisis as a Basis for Treatment. Thomas J. Mays, Philadelphia.

AMERICAN SURGICAL ASSOCIATION.

The program of the next meeting, at the Columbia University Building, Washington, D. C., May 1-3, offers the following papers:

President's Address: "Perforating Ulcer of the Duodenum." Robt. F. Weir.
Gastric Ulcer: Non-perforating: Hemorrhage. Wm. L. Rodman, Philadelphia.
Perforating Ulcer of Stomach. J. M. T. Finney, Baltimore, Md.
Benign Obstruction of Pylorus. Frederick Kammerer, New York City.
Malignant Disease of Stomach and Pylorus. Wm. J. Mayo, Rochester, Minn.
Gastric Dilatation: Gastroptosis. B. F. Curtis, New York City.
Hourglass Contraction of Stomach, F. S. Watson, Boston.
Diagnosis of Cancer of Stomach. John C. Hemmeter, Baltimore, Md.
Traumatism of Stomach, including Foreign Bodies, Rudolph Matas, New Orleans, La.
Adhesions of the Stomach. A. T. Cabot, Boston.
Stricture of Esophagus following Typhoid Fever: Gastrostomy. Frederick S. Dennis, New York City.
A Series of Demonstrations on the Cadaver, illustrative of the Mechanism of the Various Disiocations of the Hip. Oscar H. Allis, Philadelphia.
Methods of Closing Abdominal Incisions. M. H. Richardson, Boston.
Strangulated Hernia through Traumatic Rupture of Diaphragm. Laparotomy. Recovery. E. W. Walker, Cincinnati, Ohio.
Case of Subpubic Hernia of Bladder through Pelvic Floor. Operation. F. B. Harrington, Boston.
Case of Acute Tuberculosis of Mesenteric Glands of Ileocecal Coil. Removal. Permanent Recovery. M. H. Richardson, Boston.
Successful Removal of Acutely Inflamed Tubercular Mesenteric Glands. J. W. Elliot, Boston.
Congenital Cystic Tumor of Pelvis. DeForest Willard. Philadelphia.
Extirpation of Very Large Aneurysm of Renal Artery. W. W. Keen, Philadelphia.
Carcinoma of the Rectum. John B. Deaver, Philadelphia.
Spontaneous Disappearance of Carcinoma of Lip. Union following Pathologic Fracture of Femur due to Secondary Carcinoma. Leonard Freeman, Denver, Colo.
Multiple Coccygeal Fibromata. H. R. Wharton, Philadelphia.
Removal of Seminal Vesical. N. B. Carson, St. Louis, Mo.
Complete Absence of Uterus and Vagina, with Creation of New Vagina. N. B. Carson, St. Louis, Mo.
Study of Twenty-four Cases of Laparotomy for Peritoneal Infection in Typhoid Fever. Reported by George B. Shattuck, J. Collins Warren, Farrar Cobb, Committee of Boston Society for Medical Improvement. Presented by J. Collins Warren, Boston.

BOOKS AND PAMPHLETS RECEIVED.

BOOKS.

DISEASES OF GENITO-URINARY SYSTEM. A thorough Treatise on Urinary and Sexual Surgery. By Eugene Fuller, M.D., Professor of Genito-Urinary and Venereal Diseases in the New York Post-Graduate Medical School. Cloth. Pp. 774. Price $5. New York: The MacMillan Co. 1900.

MEDICAL DISEASES OF CHILDHOOD. By Nathan Oppenheim, A.B. (Harv.), M.D. (Col. P. & S., N. Y.). With 101 Original Illustrations in Half-Tone and 19 Charts. Cloth. Pp. 653. Price $5. New York: The MacMillan Co. 1900.

REFRACTION OF THE EYE. A Manual for Students. By Gustavus Hartridge, F.R.C.S., Senior Surgeon to the Royal Westminster Ophthalmic Hospital. With 105 Illustrations. Tenth Edition. Cloth. Pp. 264. Price $1.50 net. Philadelphia: P. Blakiston's Son & Co. 1900.

PLEA FOR A SIMPLER LIFE AND FADS OF AN OLD PHYSICIAN. By George S. Keith. M.D., LL.D., F.R.C.P.E. Cloth. Pp. 173. Price $1.25. New York: The MacMillan Company. 1900

PROCEEDINGS OF PHILADELPHIA COUNTY MEDICAL SOCIETY. Vol. xviii-xix. Session of 1897. Augustus A. Eshner, M.D., Editor. Cloth. Pp. 237. Philadelphia: Printed for the Society. 1897.

TRANSACTIONS OF AMERICAN DERMATOLOGICAL ASSOCIATION. TWENTY-THIRD ANNUAL MEETING, Philadelphia, May 30 to June 1, 1899. Official report of proceedings, by George Thomas Jackson, M.D., Secretary. Paper. Pp. 176. Concord, N. H.: The Rumford Press. 1900.

REPRINTS, ETC.

AN EQUATION OF RESPONSIBILITY. By Edwin W. Pyle, Jersey City, N. J. Hansen & Co. Press. 1900.

ANNUAL REPORT OF ST. ELIZABETH'S HOSPITAL. From Jan. 1, 1899, to Jan. 1, 1900. Paper. Lafayette, Ind.

A STUDY OF AURAL VERTIGO—INFLUENCE OF TURBINAL HYPERTROPHY ON THE PHARYNX.—LATE CONSECUTIVE OROPHARYNGEAL SYPHILIS. By Lewis S. Somers. M.D., Philadelphia. Reprints.

BEITRAEGE ZUR MALARIA-FRAGE. By Carl Schwalbe, M.D. Heft I. Die Malaria und die Mosquitos. Paper. Pp. 19. Berlin W. 30. Verlag von Otto Salle. 1900.

CONTUSED AND PERFORATING INJURIES OF EYEBALL; WITH REPORT OF CASES. By Thomas A. Woodruff. Reprint from Med. Standard.

ECONOMICAL DISPOSAL OF SEWAGE WITH PURIFICATION BY SMALL COMMUNITIES. By Robert Fletcher, Ph. D. Paper. Pp. 11. Supplement to N. H. Sanitary Bulletin, April, 1900.

HEADACHE FROM EYE-STRAIN; Its Diagnosis and Treatment. By Casey A. Wood, M.D., Chicago. With Astigmatic Chart. Reprinted from N. Y. Med. News.

JUSTO-MAJOR PELVIS AS A FACTOR IN CAUSATION OF PERINEAL INJURIES. By Joseph Brown Cooke, New York City. Reprinted from Med. News.

NERVE MECHANISM OF PELVIS AND ASSOCIATED REGIONS.—THE VAGINA: DESCRIPTIVE AND APPLIED ANATOMY. By Byron Robinson, Chicago. Reprints.

PROCEEDINGS OF PATHOLOGICAL SOCIETY OF PHILADELPHIA. March, 1900. Paper. Published by the Society.

PROCEEDINGS OF PHILADELPHIA COUNTY MEDICAL SOCIETY. For January and February. Paper. Published by the Society.

REMARKS ON EXTRA-UTERINE PREGNANCY.—REMARKS ON INFLUENCE OF TECHNIQUE ON RESULTS OF CLOSURE OF WOUNDS OF ABDOMINAL WALL.—REMARKS ON NEPHRECTOMY WITH A PLEA FOR THE MORE CERTAIN AND EARLIER DIAGNOSIS OF CONDITIONS REQUIRING IT. By Charles P. Noble, M.D., Philadelphia. Reprints.

NEW METHOD OF DIAGNOSIS OF TUBERCULOSIS OF KIDNEY. By Charles P. Noble, M.D., and W. Wayne Babcock, M.D., Philadelphia. Reprinted from Am. Gyn. and Obstet. Jour.

REPORT OF KENSINGTON HOSPITAL FOR WOMEN. From Oct. 10, 1898, to Oct. 9, 1899. Philadelphia.

VARIATION OF TYPE IN DIPHTHERIA AND SCARLET FEVER. By Henry D. Fulton, Pittsburg, Pa. Reprinted from Med. Council.

TRADE PAMPHLETS.

ANTI-DIPHTHERITIC SERUM, KRYOFINE, AMINOFORM AND OTHERS. New York: C. Bischoff & Co.

THE ACID DIATHESIS, TONO SUMBUL CORDIAL, GRANULAR EFFERVESCENT SALTS, INGLUVIN. A HARMLESS REMEDY FOR GRADUALLY REDUCING OBESITY. By William T. Cathell, A.M., M.D., Baltimore, Md. New York: William R. Warner & Co.

UROTROPIN; COLLARGOLUM AND UNGUENTUM CREDE; XEROFORM; BETA-EUCAIN, AND OTHERS. New York: Schering & Glatz. 1900.

NEW PATENTS.

Patents granted April 3-10, of interest to Physicians, Etc.

646,723. Hernial truss, Alfred Bedson, Paterson, N. J.
646,793. Medical galvanic battery, Harry Bentz, New York, N. Y.
646,491. Spray-tube for atomizers, Harley M. Dunlap, Battle Creek, Mich.
646,574. Operating table, George E. Gorham, Albany, N. Y.
646,579. Truss, Irven E. Johnson, Woodville, Texas.
646,844. Manufacturing water-resisting products from casein, Wilhelm Krische, Hanover, and A. Spitteler, Wolfratshausen, Germany.
646,580. Hot-air or vapor bath cabinet, Joseph H. Lennon and A. C. Whaley, Buffalo, N. Y.
646,611. Disinfecting apparatus, Michael Sheridan, New York, N. Y.
646,631. Phenol ether of quinin carbonic acid, Albert Weller, Frankfort-on-the-Main, Germany.
647,130. Disinfecting device, Jules B. Bengue, Paris, France.
647,372. Truss, Joseph W. Bradford, Los Angeles, Cal.
647,075. Making compounds of paraphenetidin, Wm. H. Claus, A. Ree, and L. Marchlewski, Manchester, England.
647,294. Hot-water bag, Hattie C. Cropley, Washington, D. C.
646,962. Forming sacks for suspensory bandages, Richard Dove, Westville, N. J.
647,392. Oxypurin and making same, Emil Fischer, Berlin, Germany.
647,263. Ester of acetylphenylglycinortho carbonic acid, Bernhard Heymann, Elberfeld, Germany.
647,006. Special apparatus for electric baths, Antonio Maggiorani, Rome, Italy.
647,003. Pessary, Martha J. Kuzuik, Chicago, Ill.
647,001. Battery case for electromedical apparatus, James H. Mahler, and C. F. Dunderdale, Chicago, Ill.

Copies of above patents may be obtained for ten cents each by addressing John A. Saul, Solicitor of Patents, Fendall Building, Washington, D. C.

Queries and Minor Notes.

SIGN ALL COMMUNICATIONS.

If "Subscriber," Kansas City, will send his name, his query will be answered.

REQUIREMENTS FOR PRACTICE.

KENOSHA, WIS., April 23, 1900.

To the Editor.—I would like to ascertain what the requirements are to enable an M.D. to practice in the different states. I believe I have seen it in THE JOURNAL, or elsewhere, but the article is not in my possession. Very truly, J. M.

ANSWER:—Requirements for practice were published in THE JOURNAL of Nov. 12, 1898, p. 1195. They were correct at that time, but there have been a number of changes since, and some are or were very recently still pending in the different legislatures. The State Board of Health of Illinois, in its report for 1898, also published a complete list of the different state requirements.

ARMY AND NAVY JOURNALS.

NEWTONVILLE, ALA., April 18, 1900.

To the Editor.—Will you inform me where I can get a journal of the army and navy? I wish to subscribe for a medical journal published by the respective corps of each service, but do not know where to get this. Very truly, T. W. J.

ANSWER:—We are not aware of any special medical journal published by either the army or navy in this country. Papers are occasionally published by medical officers, in the various journals and also in the report of the surgeon generals of the two services.

UNION OF BLOOD-VESSELS.

OGDEN, UTAH, April 10, 1900.

To the Editor.—Will you kindly inform me as to the present status of experimentation for the union of severed blood-vessels, etc., and refer me to the literature of note on this subject.

Very respectfully, H. B. F.

ANSWER:—Suture of the larger arteries has been demonstrated, by experiments on animals as well as by actual operations on the human subject, to be a successful surgical procedure. Following is a list of cases reported to date: Heidenhain, in 1894, sutured the axillary artery, with recovery; v. Zoege Manteuffel, 1895, the common femoral, with recovery; Israel, 1895, the common iliac, with recovery; Ssabanjeff, 1896, the femoral, with subsequent amputation of the leg, and death; Orlow, 1896, the popliteal, with recovery, Murphy, 1897, the femoral, with recovery; Snider, 1898, the femoral with recovery; Garré, 1898, the internal carotid, and the brachial, with recovery in both cases. The best articles on the subject are by Murphy (*Medical Record*, 1897, Vol. ii., No. 3); Silberberg (Inaug. Dis., 1899); Dörfler (Beiträg. zur Klin. Chir., 1899, xxv., p. 781). In Dörfler's article will be found the literature of the subject up to date.

A QUESTON OF ETHICS.

GRAND ISLAND, NEB., April 19, 1900.

To the Editor: Please state your views at length as to the right or wrong in the following case. Dr. A. had been attending a patient some three days, and though the case was serious Dr. A. had maintained a hopeful prognosis. Consultation was requested by the patient and his friends, to which Dr. A. readily agreed and suggested the name of Dr. B. Dr. A. takes Dr. B. with him, at the same time acquainting him with the fact that the friends of the patient had asked that Dr. X. be called. Two consultations were thus held, and once, with the knowledge and consent of the patient, Dr. A. had Dr. B. visit him alone, although Dr. A. continued in charge of the case, and at no time was there any hint that he was not giving satisfaction. Nor did Dr. B. suggest any change in the treatment, and the patient continued to improve, though he was advised by both that it would be slow. Three days after the last consultation, without the knowledge of Dr. A, Dr. B. was asked to take charge of the case, and did so without advising Dr. A. of it, and continued in attendance, incidentally mentioning the fact to Dr. A. several days later. Both doctors are members of the AMERICAN MEDICAL ASSOCIATION. ETHICS.

ANSWER.—If "Ethics" has given an impartial statement of the unpleasant occurrence there can be only one reply, viz., that Dr. B. had no right to accept the case under the circumstances.

The Public Service.

ARMY CHANGES.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., April 7 to 20, 1900, inclusive:

John S. Fogg, acting asst.-surgeon, from Washington, D.C., to Columbus Barracks, Ohio, for temporary duty.

William C. Gorgas, major and surgeon, U. S. A., assigned as chief surgeon, Department of Havana and Pinar del Rio, Cuba.

Jefferson R. Kean, major and surgeon, U. S. A., from duty as chief surgeon, Department of Havana and Pinar del Rio, to report to the commanding officer, Division of Cuba, for assignment.

George F. Shiels, major and surgeon, Vols., honorably discharged at his own request, to take effect June 10, 1900; he meanwhile will report for temporary duty in the Department of California.

Edwin P. Wolfe, lieutenant and asst.-surgeon, U. S. A., leave of absence extended.

Alfred A. Woodhull, lieutenant-colonel, deputy surgeon-general, U. S. A., from Somerville, N. J., to Washington, D. C., reporting in person to the surgeon-general.

James L. Bevans, acting asst.-surgeon, from temporary duty at the general hospital, San Francisco, Cal., to Seattle, Wash., for duty in the Department of Alaska.

William C. Borden, captain and asst.-surgeon, U. S. A., to represent the Medical Department of the Army at the Ninth Annual Meeting of the Association of Military Surgeons of the United States, to be held in New York City, May 30 to June 2, 1900.

Charles C. Byrne, colonel and asst.-surgeon-general, U. S. A., as Borden, see above.

Robert E. Caldwell, acting asst. surgeon, from temporary duty at Alcatraz Island, Cal., to Seattle, Wash., as transport surgeon on the transport *Rosecrans*.

William D. Crosby, major and surgeon, Vols. (captain and asst.-surgeon, U. S. A.), relieved from further duty in the Philippines and assigned as attending surgeon and examiner of recruits in New York City, N. Y.

Calvin DeWitt, lieutenant-colonel and deputy surgeon-general, U. S. A., from New York City, to Washington, D. C., to report to the surgeon-general for instructions.

Euclid B. Frick, captain and asst.-surgeon, U. S. A., to represent the Medical Department of the Army at the meeting of the AMERICAN MEDICAL ASSOCIATION, to be held at Atlantic City, N. J., June 5 to 8, 1900.

Charles M. Gandy, captain and asst.-surgeon, U. S. A., as Borden, see above.

Thomas W. Jackson, acting asst.-surgeon, from New York City to West Point, N. Y., for temporary duty at the U. S. Military Academy.

James M. Kennedy, captain and asst.-surgeon, U. S. A., relieved from further duty in the Department of California, to report about May 10, 1900, at San Francisco, Cal., for transportation to Manila for duty in the Division of the Philippines.

William Stephenson, captain and asst.-surgeon, U. S. A., as Frick, see above; also relieved from duty as attending surgeon and examiner of recruits at New York City, and assigned to the Department of California.

Harrison W. Stuckey, acting asst.-surgeon, now *en route* with troops to San Francisco, Cal., will report to the commanding general in that city for assignment to duty with troops going to Manila; on arrival at which place he will report for assignment in the Division of the Philippines.

Alfred A. Woodhull, lieutenant-colonel and deputy surgeon-general, U. S. A., as Frick, see above.

In addition to the above, Special Orders, No. 93, of April 20, 1900, directs the following named acting asst.-surgeons to proceed from

the places indicated to San Francisco, Cal., and report in person to the commanding general, Department of California, for temporary duty: Thomas Z Ball, from Waveland, Ind.; James L. Day, from Lebanon, Mo.; Paul T. Dessez, from Washington, D. C.; Robert L. Felts, from New York City; Alva R. Hull, from New Sharon, Iowa; Frederick W. Hulseberg, from New Haven, Conn.; Frederick C. Jackson, from Columbus, Ohio; Wendell A. Jones, from Westerville, Ohio; James V. May, from Philadelphia, Pa.; Sanford B. McClure, from Cincinnati, Ohio; Lewis B. Porter, from New Haven, Conn.; Thomas L. Rhoads, from Boyertown, Pa.; John L. Shepard, from Galesburg, Ill.; John M. Sheperd, from Brooklyn, N. Y.; Edmund D. Shortlidge, from Wilmington, Del.; Edwin R. Tenny, from Kansas City, Kan.; Charles F. Sanborn, from Williard, N. Y.

NAVY CHANGES.

Changes in the Medical Corps of the U. S. Navy for the week ended April 14, 1900.

P. A. Surgeon F. W. Olcott, ordered to duty at the naval recruiting rendezvous, Philadelphia, Pa.

MARINE-HOSPITAL CHANGES.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the United States Marine-Hospital Service for the seven days ended April 12, 1900.

Surgeon J. H. White, detailed as inspector of quarantine stations.

P. A. Surgeon J. O. Cobb, detailed as delegate to attend the meeting of the American Climatological Association at Washington, D. C., May 1-3, 1900.

Asst.-Surgeon C. E. Decker, bureau letter of March 31, 1900, granting Asst.-Surgeon Decker leave of absence for 29 days on account of sickness, amended so that the said leave shall be for 23 days only.

Asst.-Surgeon John McMullen, to proceed to the South Atlantic quarantine station (*en route* to Tortugas) and report to the medical officer in command for temporary duty.

Asst.-Surgeon D. H. Currie, granted leave of absence for 10 days from May 4, 1900.

Asst.-Surgeon A. J. McLaughlin, to report to medical officer in command of the service at New York City, for duty and assignment to quarters.

Asst.-Surgeon J. D. Long, to report to medical officer in command of the service at Boston, Mass., for duty and assignment to quarters.

Asst.-Surgeon N. W. Glover, to report to the medical officer in command of the service at Baltimore, Md., for duty and assignment to quarters.

Asst.-Surgeon B. H. Earle, to report to the medical officer in command of the service at Chicago, Ill., for duty and assignment to quarters.

Asst.-Surgeon B. J. Lloyd, to report to the medical officer in command of the service at Mobile, Ala., for duty and assignment to quarters.

Acting Asst.-Surgeon S. B. Hunter, granted leave of absence for two days.

Hospital Steward F. R. Hanrath, upon being relieved from duty at St. Louis, to proceed to New York City, and report to the medical officer in command for duty and assignment to quarters.

Hospital Steward S. W. Richardson, relieved from duty at Cleveland, Ohio, and directed to proceed to St. Louis, Mo., and report to the medical officer in command for duty and assignment to quarters.

APPOINTMENTS.

John D. Long, of Pennsylvania: Mervin W. Glover, of the District of Columbia; Baylis H. Earle, of South Carolina, and Bolivar J. Lloyd, Texas, commissioned as assistant-surgeons April 9, 1900.

BOARD CONVENED.

A board of officers will be convened at the Service Building, 378 Washington Street, New York City, Wednesday, May 23, 1900, for the purpose of examining candidates for admission to the grade of assistant-surgeon in the United States Marine-Hospital Service.

Candidates must be between 21 and 30 years of age, graduates of a reputable medical college, and must furnish testimonials from responsible persons as to character.

..*The* following is the usual order of the examination: 1, physical; 2, written; 3, oral; 4, clinical.

In addition to the physical examination, candidates are required to ceritfy that they believe themselves free from any ailment which would disqualify for service in any climate.

The examinations are chiefly in writing, and begin with a short autobiography of the candidate. The remainder of the written exercise consists in examination on the various branches of medicine, surgery and hygiene.

The oral examination includes subjects of preliminary education, history, literature and natural sciences.

The clinical examination is conducted at a hospital, and when practicable candidates are required to perform surgical operations on a cadaver.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order as vacancies occur.

Upon appointment the young officers are as a rule first assigned to duty at one of the large marine hospitals, as at Boston, New York, New Orleans, Chicago or San Francisco.

After five years' service, assistant-surgeons are entitled to examinations for promotion to the grade of passed assistant-surgeon.

Promotion to th egrade of surgeon is made according to seniority, and after due examination, as vacancies occur in that grade. Assistant-surgeons receive $1600, passed assistant-surgeons $2000, and surgeons $2500 a year. When quarters are not provided commutation at the rate of $30, $40, or $50 a month, according to grade, is allowed.

All grades above that of assistant-surgeon receive longevity pay, 10 per centum in addition to the regular salary for every five years' service up to to 40 per centum after twenty years' service.

The tenure of office is permanent. Officers traveling under orders are allowed actual expenses. For further information, or for invitation to appear before the board of examiners, address, Supervising Surgeon-General, U. S. Marine-Hospital Service, Washington, D. C.

HEALTH REPORTS.

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended April 20, 1900.

SMALLPOX—UNITED STATES.

Alabama: Mobile, April 7-14, 1 case.
District of Columbia: Washington, April 7-14, 1 case.
Florida: Jacksonville, April 7-14, 1 case.
Illinois: Chicago, April 7-14, 1 case.
Indiana: Evansville, April 7-14, 4 cases.
Kansas: Wichita, April 1- 7, 5 cases; Wichita, 7-14, 14 cases.
Kentucky: Covington, April 7-14, 9 cases; Lexington, April 7-14, 3 cases.
Louisiana: New Orleans, April 7-14, 51 cases; 19 deaths.
Maine: Portland, April 7-14, 1 case.
Maryland: Baltimore, April 7-14, 1 case.
Michigan: Detroit, April 7-14, 1 case.
Minnesota: Minneapolis, April 1-14, 20 cases.
Nebraska: Omaha, April 7-14, 4 cases.
New York: New York, April 7-14, 1 case, 1 death.
Ohio: Cleveland, April 7-14, 11 cases, 2 deaths.
South Carolina: Greenville, April 7-14, 2 cases.
Utah: Salt Lake City, April 1-14, 3 cases.
Virginia: Portsmouth, April 7-14, 1 case.
Washington: Spokane, April 7-14, 3 cases.

SMALLPOX—FOREIGN.

Austria: Prague, March 17-24, 4 cases.
Belgium: Antwerp, March 24-31, 2 cases, 2 deaths; Ghent, March 24-31, 2 deaths.
Brazil: Rio de Janeiro, February 23-March 2, 15 deaths.
Canada: Quebec, Bonaventure County, April 5-12, 25 cases.
Colombia: Barranquilla, March 24-31, 5 cases, 5 deaths.
Egypt: Cairo, March 11-18, 8 cases.
England: Liverpool, March 24-31, 21 cases, 1 death; London, March 17-31, 8 cases, 1 death.
Gibraltar, March 26-April 1, 3 cases, 1 death.
Greece: Athens, March 24-31, 10 cases, 6 deaths.
India: Bombay, March 6-13, 222 deaths; Kurrachee, March 4-11, 17 cases, 6 deaths.
Italy: Palermo, March 17-24, 1 death.
Mexico: City of Mexico, March 18-April 1, 40 cases, 22 deaths; Vera Cruz, April 1-7, 3 deaths.
Russia: Moscow, March 10-17, 9 cases, 2 deaths; Riga, January 1-31, 38 deaths; St. Petersburg, March 3-10, 20 cases, 8 deaths; Warsaw, March 10-17, 1 death.
Spain: Corunna, March 24-31, 1 death; Madrid, March 16-24, 6 deaths; Valencia, March 24-31, 3 cases, 3 deaths.
Straits Settlements: Singapore, February 10-March 3, 14 deaths.

YELLOW FEVER.

Brazil: Rio de Janeiro, February 23-March 2, 18 deaths.
Colombia: Barranquilla, March 24-31, 1 case, 1 death; Panama, March 27-April 10, 3 cases.
Cuba: Havana, March 1-April 17, 2 cases, 4 deaths.

CHOLERA.

India: Bombay, March 6-13, 222 deaths; Kurrachee, March 4-11, 90 cases, 63 deaths.

PLAGUE—INSULAR.

Philippines: Manila, February 24-March 3, 7 deaths

PLAGUE—FOREIGN.

India: Bombay, March 6-13, 736 deaths; Kurrachee, March 4-11, 90 cases, 63 deaths.
Japan: Formosa, Tamsui, January 1-31, 53 cases, 43 deaths; Formosa, Tamsui, February 1-28, 46 cases, 39 deaths; Osaka, April 16, present.
Paraguay: Asuncion, February 8-15, 6 deaths.
Persia: Djiranro, March 29, present.

CHANGE OF ADDRESS.

Dr. C. F. Allen, from Milwaukee to Middleton, Wis.
Dr. M. W. Bland, from Hotel Morrison to 239 Ogden Avenue, Chicago.
Dr. R. L. Black, from 3013 Perry Ave. to City Hospital, Kansas City, Mo.
Dr. J. Bixby, from Diller to Strong, Neb.
Dr T. J. Blakeley, from Cuyahoga Falls to St. Johns, Ohio.
Dr. H. W. Clements, from Mulltown to Hahvia, Ga.
Dr. B. Daniel, from Augusta to Hillis, Ga.
Dr. W. E. Frank, from Keokuk, Ia., to Trivoli, Ill.
Dr. W. A. Funk, from Baltimore, Md., to 25 E. 112th St., New York City.
Dr. G. E. Garwood, form Toledo to Deshler, Ohio.
Dr. W. S. Hendricks, from 915 to 927 W. North Ave. Chicago.
Dr. E. C. Hamley, from 1031 Taylor St. to 238 Winchester Ave, Chicago, Ill.
Dr. W. S. Hull, from New Market to Faucett, Mo.
Dr. H. H. Hartley, from Condon to Prairie City, Oregon.
Dr. C. E. Houston, from Charleston to Florence, S. C.
Dr. T. H. Jameson, from Enfield, Ill., to Wellington, Kansas.
Dr. J. F. Jones, from Sherman, Texas, to Cardena, S. L. P., Mexico.
Dr. F. C. Kovats, from 222 S. Paulina St. to 640 Jackson Boul., Chicago, Ill.
Dr. A. F. Kemp, from St. Louis to Venice, Mo.
Dr. T. W. Little, from Keokuk to Long Grove, Iowa.
Dr. W. A. Loops, from Milwaukee to Loyd, Wis.
Dr. W. J. Lonergan, from Oshkosh to Princeton, Wis.
Dr. F. E. McClane, from Nashville to Lebanon, Ill.
Dr. F. Le Moyne, from Sagertown to 503 Castleman St., Pittsburg, Pa.
Dr. J. A. Patton, from 2082 Congress St. to 2271 Harrison St., Chicago, Ill.
Dr. D. H. Pelletier, from Chicago to St. Anne, Ill.
Dr. E. D. Piper, from 2116 Monroe St. to 2141 Jackson Boul., Chicago, Ill.
Dr. G. S. Roach, from Augusta to Johnston Station, Ga.
Dr. A. N. Sloan, from Sioux City, Ia., to Franklin, Neb.
Dr. A. H. Stebbins, from Marian and Zacks Sts. to 413 Florida St., Tampa, Fla.
Dr. T. Tomelty, from St. Martins to Big Bend, Wis.
Dr. H. H. Wehrs, from St. Louis to Boeuf Creek, Mo.